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SURVEY RESULTS

The response to our reader survey was by far the best we have ever received . . . for which we thank you. Not unexpectedly, scanning proved to be the single most important topic for the majority of our readers, however, the battle for second place was virtually a draw between all our other features. Most readers stated in their response that they were generally interested in a wide variety of communication areas and there was a strong request for more do-it-yourself articles, particularly in respect to antennas.

We have taken all the results on-board and in our next issue there will be a lengthy piece on the almost forgotten "longwire" antenna, a d-i-y discone antenna, hopefully a piece on directional antennas including plans for a three element Yagi (if not in the next issue, the one after that) plus the usual features . . . including a story by Bob Lopaka on tow-truck operators and what he promises is the "best list of tow-truck frequencies ever".

SURVEY WINNERS

As promised, the winners of a six-issue subscription for assisting us in the survey are:

NSW — M. Bulmer, Ashfield; Tasmania — A. Cornwall, Ferntree; Victoria — L. McGregor, Glenroy; Western Australia — D. Dowley, Willagee; Queensland — S. Hutton, Mackay; Northern Territory — J. O'Neill, Malak; South Australia — D. McFarlane, Mt Gambier.

Your free sub commences with this issue.

LEOPARD MkII

Regular readers will recall some comments Ken Reynolds made in the review of the above rig in which he wondered about a large heat-sink and felt that maybe there had been some "problems with the power regulator" in prototype units. John Bishop of Hatadi Electronics has advised us that this was not the problem, in fact there was no problem. He tells us that "the change in the power regulator circuitry was needed so that the unit will operate anywhere from 10v to 24v DC without harm to the unit and without the need for a 24/12v converter".

IN THIS ISSUE

There is a really good spread of articles in this issue which should keep most readers happy. Scanfans have Russell's ubeaut SCAN column, a review on the MVT7000, airadio frequencies from Rob Williams and some information on fire brigade operation and frequencies from Tony Santos. Jack Haden goes to town on the "freeband" situation, plus of course his DX International and a report on the Montserrat DXpedition while Rob W reviews the ICOM IC-R72A and Ken Reynolds gives the thumbs up to Cobra's old-design but very talented 146GTL.

Then there's all the regular columns, SWL information, DX probability chart and a whole lot more. Sorry about the lack of a Wordmaze for the second issue in a row but we just ran out of space . . . next issue, guaranteed.

CB Action

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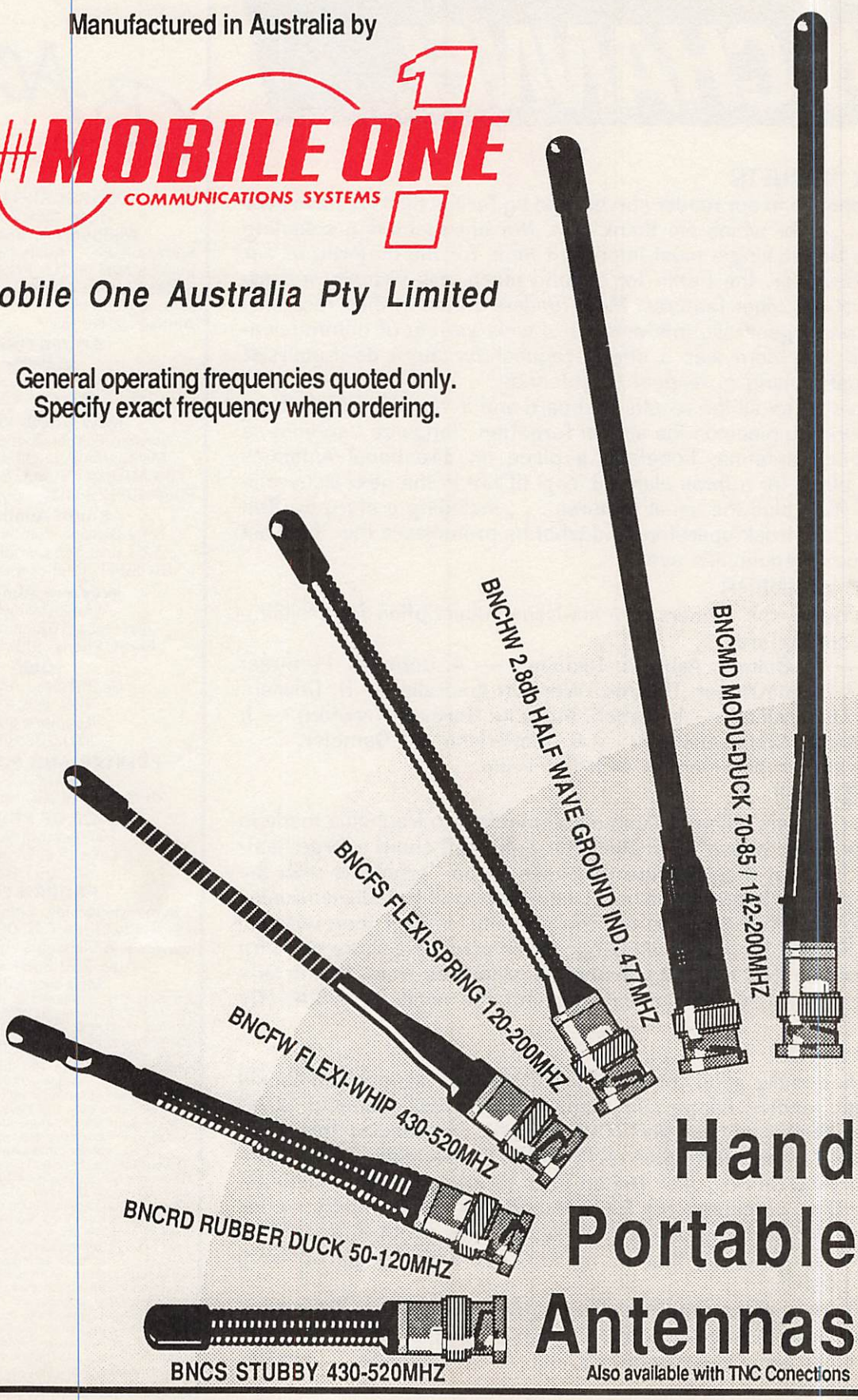
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BASE ANTENNA FOR YOUR SCANNER, UHF CB AND VHF/UHF HAM RADIO?

You want to listen *AND* talk across the bands? DAVID FLYNN tells you how . . .

It's human nature to want more. "Greed is good", according to the Gospel of Gordon Gecko. Maybe you can't relate to the money-hungry clawings of Wall Street or even Collins Street but in our own way we radio buffs fall victim to a similar thirst. No matter how good is our range, our talk distance, we want more.

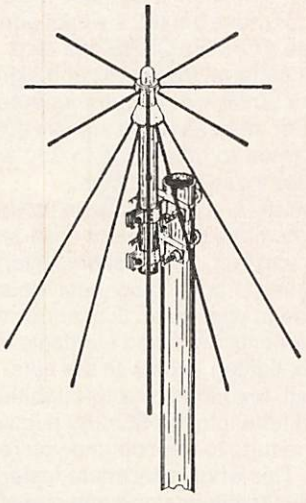
This craving for RF affects us all, and few as noticeable as the scanner enthusiast. Thousands of frequencies at your command, and somewhere out there SOMEONE is using them. Who are they, what are they saying? It's enough to drive even the most affable monitor into an FM feeding frenzy.

Let's complicate the picture by adding some transceivers. Scanner owners are likely to operate UHF CB radio or be licenced as a 'limited' or VHF/UHF-only ham (this comes from CBA's annual reader surveys). It's also possible that much or all of the gear will be handhelds. Our user may be quite satisfied with the gear itself yet still want to give their signals a leg-up. There is an answer. It's fast, easy and inexpensive. It's one antenna - a discone.

IT'S LONG BEEN A FAVORITE

The discone has long been a favorite of services needing to utilise vast slabs of spectrum. As the name indicates it combines the shapes of a disc and a cone (and is thus pronounced 'disc-cone', not dis-con or die-scone). These shapes are formed by a series of elements, the disc sitting atop the structure with the spires of the cone angled below. Discones are impressive if strange looking beasts. If anything, they resemble a randy pair of anorexic spiders caught in the act. At the best of times, they look something out of an old space adventure serial with shades of Fritz Lang's 'Metropolis' for good measure. But they work, and work well. The design provides reception and transmission over a wide range of frequencies. For the tech-heads, it maintains a nearly constant impedance of 50 ohms and a radiation pattern identical to a vertical dipole. Also like a dipole it has unity gain, which can be rather unrealistically thought of as being 2.14 dB over an isotropic radiator.

Although it is most commonly thought of as a VHF/UHF aerial the discone can, like any other antenna, be cut to cover well below and above that territory. You can construct a discone for HF, but the long wavelengths will result in antenna which is practically huge and hugely impractical, without significant gain. It's only around the VHF and UHF bands that discones come into their own and into this story.



This is the Tandy Electronic's 'Archer' brand discone which receives from 25 MHz through to 1300 MHz and will work outside this range with some degredation of performance...catalogue number is 20-013.

SECRET LONGINGS...

Until recent times I had never felt the need for an outdoor antenna. I am fortunate enough to live in the Blue Mountains, with absolute line of sight across Sydney and her sprawl north and south, so my radio reach has always been adequate and certainly nothing to complain about. The scanner pulled in my VHF and UHF favorites, the 477 MHz rig could handle all the repeaters plus decent simplex range, and a dual-band amateur radio brought in the local 2 metre and 70 centimetre ham repeaters full quieting. So far, so good. Note that all of this is done on handhelds - a Cobra SR-15, Icom IC-40 and Alinco DJ-500T, respectively. Handhelds are the soul of convenience. I can take them to any part of the house, upstairs or downstairs, kitchen or study, and still keep an ear on the scanner action, the CB or ham conversation.

I'VE GIVEN UP ON REPEATERS

Yet slowly, secretly, I hungered for more. Sometimes I went a'scanning and found too much noise, not enough signal. Like many Sydney UHFers I've all but given up on repeaters, preferring simplex chats on local net channels - a task which a 1.5 watt handheld isn't always up to. And I'd discovered some amateur repeaters and simplex contacts which required me to stand on the sundeck and often in peculiar positions to obtain a reliable signal (for those unused to portables, note that even a step to your left or right can and will alter signal strength dramatically). Outdoor operation is not fun in the rain or when the mosquitoes are playing 'Desert Shield' with your arms and legs. On top of all this, I definitely didn't want three or four aerials hanging off the roof. I don't care for being a 'power station', a 'king of the repeaters'. And given the high altitude, the last thing I need is massive gain. I just wanted an edge, some extra signal when it was necessary.

ADVICE FROM THE MASTER

With all this in mind I consulted Russell Bryant BSc (Bachelor of Scanning), fellow columnist and monitor extraordinaire, who recommended a discone as most suited towards my peculiar needs. There is no shortage of discones

(continued over...)

SCANTENNA XLR DISCONE FROM SOUTH PACIFIC RADIO

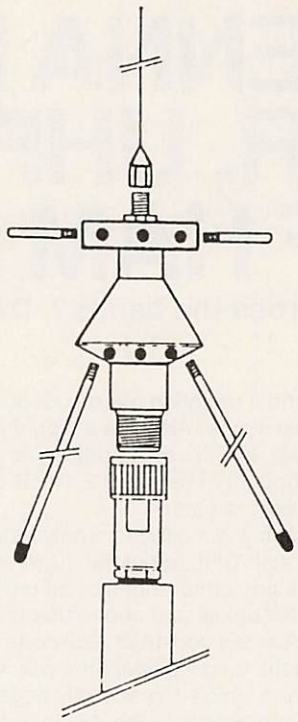
Although South Pacific Radio's XLR scantenna has been around for quite a few years it remains a popular unit for both scanning and UHF CB operation.

The XLR is completely Australian made and sells for $160 including insured freight to anywhere in Australia.

It is extremely wideband and covers 25 - 1300 MHz. It was first reviewed in this magazine away back in 1987 and it is a measure of its popularity and design that it remains unchanged today.

The aluminium discone head assembly is precision-machined and has 16 lightweight tubular aluminium elements which screw into the head. There are actually 17 elements as a short stainless steel (all elements are of stainless steel) whip is fitted above the cone to provide better performance at lower frequencies.

As David Flynn says in the article, a discone antenna is a very versatile unit which can perform more than just one task in the UHF, VHF area.



BASE ANTENNA

(continued from prior page.....)

on the market but only three that are actually rated for transmission, which requires a higher degree of quality and accuracy in the aerial. I chose Tandy Electronic's discone, which bears their 'Archer' house brand and is brilliantly marketed under the memorable name of 'Cat. No. 20-013' (come on, guys - what's wrong with ScanMaster, Archer D-13, or something equally wanky?).

Like most of its ilk, the 20-013 receives from 25 MHz through to 1300 MHz, which is pretty much the coverage of the modern 'super scanner'. It works outside this range although the performance does drop of fairly steeply. It will also handle transmission on all amateur bands within these limits - the popular 2 metre (144 MHz) and 70 cm (430 MHz) allocations, plus the interesting microwave spot of 1296 MHz (23 cm).

IT'S ALSO RATED FOR THE 220 MHz BAND

Due to the international market to which Tandy must cater, the discone is also rated for the American 220 MHz band (now there's one I'd like to try) and for some reason 900 MHz. I'm unaware of any amateur services operating around 900 anywhere in the world, and assume that this was thrown in as a bonus for commercial users... unless it is for Japan's 900 MHz 'personal radio service'? While the discone is maximised for these bands, it works admirably on the 477 MHz CBRS and also doesn't suffer at the hands of a signal from the 50 MHz or 6 metre amateur band. For all transmitted signals the 20-013 is rated to handle up to 200 watts, ample for these frequencies.

Assembly is a breeze, even for those of us who have trouble with child-proof bottles and jars. Tandy supply everything, even U-bolts to connect the support tube to your mast. Just screw the disk elements and cone elements into the hub, tighten each with the nuts provided, feed the co-ax through the support tube into the SO-259 hub socket, fit the tube to the hub and you're on the air. This whole procedure lasted a leisurely 20 minutes and one cup of coffee.

SWR WAS GOOD

First test was to check the SWR. Tandy claim '1.5:1 or better' across the range and their faith did not desert them. At 144 MHz it drew 1.2:1; at 70 cm, 1.3:1; and on UHF CB, a respectable 1.32:1. A borrowed 6 metre rig brought the figure up slightly to 1.35:1, which is still acceptable by almost any standard.

THE DISCONE DIFFERENCE

I was most curious to see just how well the 20-013 performed, and so delayed the rooftop installation for a moment and perched it on the sundeck, which has line of sight to the city and surrounds. I began with a quick hookup to the scanner and a selection of fringe signals. It's a good idea to have some 'test frequencies' at hand if ever you want to suss out just how much better is this scanner or that antenna. VHF simplex channels are a good indicator of relative performance. Airband ATIS (Automatic Terminal Information Service) frequencies are ALWAYS on air, and police are a close second. I began by dialling up Camden Airfield ATIS on 125.1 MHz, which is normally quite scratchy but was greatly improved under the discone; likewise, the Southern Highlands VKG link on 468.050 MHz. A greater jump was found in the 84 MHz VKG allocation, with Newcastle going from zero to hero; I could even log some simplex UHF handheld traffic from Sydney airport! This set the mood for the day - hearing stations that I'd never heard or worked before.

AS ALWAYS...CRETINS

Onto UHF CB, and all the city repeaters were there as expected. Filled with cretins, as expected. I've traditionally had some trouble working through the northern Sydney 7/37 repeater and also 2/32, which although in the Blue Mountains is to the high north and so places me in a shadow. Both went from noisy to near-perfect. Also making their first appearance were Southern Highlands 6/36 and Wollongong 8/38. And this, remember, on a 1.5 watt handheld with the discone still perched on the balcony.

LET ME COUNT THE WAYS

I swung down to the amateur bands quite unprepared for the discone difference. My dual-band Alinco has the atypical dual-band whip with a base loading coil for 144 MHz and a single length of wire as a 430 MHz quarter-wave. By no means spectacular, but how much better would a unity gain dipole really be?

As the bard said, 'let me count the ways'. Every Sydney repeater, 2 metres and 70 cm, city and suburbs, noise-free. Without exception. I discovered repeaters I thought were off the air had been there all along. Then, out with the VK2 repeater list to try those further afield. Paths north and south were brilliant, with VHF at Gosford (6725) and Wollongong (6850) at full quieting. Gosford's UHF cousin on 8075 was there in spirit but the RF was weak. Still, they'd not been there at all mere minutes ago. And the discone was yet

to find a home on higher ground.

Mounting an antenna like the 20-013 is little different to installing any other communications aerial. Height is the key where VHF and UHF are concerned. Find a nice and convenient position, clear of any obstacles, and you'll be well rewarded. If you are only using the discone for receiving, for scanning, you needn't be too concerned with using the thicker and low-loss coaxial cables such as RG-8 or RG-213. RG-58 will do fine, especially if you have plenty of height on your side.

Those intending to transmit may opt for the thicker cables, more for the sake of habit and signal loss at UHF. For these users, height is even more essential in order to crack those repeaters. It may take an extra 10 metres to place the discone right atop the roof or TV aerial mast, but if the majority of the cable must run vertical then it will be worth the effort, because the advantages of extra altitude generally far outweigh and compensate for any loss of signal in the cable run.

With the amount of height I already had, and that extra which the discone would have once installed, I decided that a good run of good cable such as Belden RG-58/U would suffice. Again, VHF and UHF afficianados should bear in mind that for these higher frequencies no-name coax and connectors are a dead loss (no pun intended). If you buy RG-58 for 50 cents per metre and PL-259 plugs for $1 apiece, you will only get what you pay for.

The 20-013 requires a mast size of up to 380 mm and was fitted to the side of my houses' upper level using a J-pole or 'hockey stick'. A dab of Silastic around the PL-259 connector inside the discone tube, a grounding wire from the aerial to a stake in the ground and the job was done.

As I tap out these words on the wp, the amateur handheld is tuned to Gosford's 430 MHz repeater, awaiting a call from a friend working his way mobile from the north coast to Melbourne. There goes the CW ident, signing 'VK2RAG' and not a bit of noise in evidence. Later this evening he'll be passing through the footprint of 6/36 and 8/38, so we may switch to UHF CB for a while. In the meantime, Russell has lent me his AOR-1000 scanner (get thee behind me, Satan!) and I'm dying to put it through it's paces right across the bands.

if you're a monitor, UHF CBer, VHF/UHF ham or all of the above - discover the discone difference!

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scan

with Russell Bryant

FREQUENCIES, CODES and EVERYTHING ELSE YOU WANT TO KNOW ABOUT SCANNING

All frequencies are FM and all times are local, unless stated otherwise.

IN THE BEGINNING (PART 2)

Now that you have purchased your scanner, you will need to know where to listen. This guide lists the scanner bands from 30 MHz to 1, 000 MHz, their names and who you may expect to hear on them. Regardless of the hobby, each has rules to be followed, especially if you wish to enjoy the hobby to it's maximum. Scanning is no different, the RF spectrum is broken up into a number of bands, each has users unique to that portion of the spectrum. Other systems can be found across all bands. The definitions applied to individual portions follow the offical Department of Transport and Communications guidelines. Here is where to listen.

LOW BAND VHF 30 MHz to 50 MHz

The military is the largest user on low band, however Land Mobile two way systems have been given approval for licences here. Paging services also occupy 30-50 MHz. As this is a fairly new allocation to Australia, there is not much to heard here yet. Low band has been used in Amercia and South East Asia for sometime, when conditions are right transmissions from these areas can be received in Australia.

MID BAND VHF 68 MHz to 88 MHz

While it is used mostly in rural areas, it is not entirely confined to country Australia. Before UHF was introduced to the Land Mobile market in the early seventies, mid band VHF together with high band VHF where the most active of bands in Australia. Nearly all of the countries emergency services still occupy this band or portions of it. Police, Ambulance, Fire Brigade, Local councils, bushfire brigades and other miscellaneous government departments have allocations on the Mid Band VHF.

VHF AIR NAVIGATION BAND 108 MHz to 118 MHz AM

Navigational aids on-board aircraft use frequencies in this band during flights, not much voice communications here. Beacons and airfield weather services can be monitored on the Air Navigation band. Some scanners have this portion omitted from their coverage.

VHF AIR COMMUNICATIONS BAND 118 MHz to 136 MHz AM

Communications between aircraft and towers as well as aircraft to aircraft take place on these frequencies. A very busy portion of the RF spectrum especially on weekends. Aircraft band monitoring has a devoted following in Australia, aircraft spotters can be seen at most airports with scanner and camera in hand.

HIGH BAND VHF 144 MHz to 174 MHz

Amateurs occupy the first four megahetz of this band (144-148) Paging systems are between 148 MHz and 150 MHz. RF links as well as fixed services occupy from 150 MHz to 156 MHz. The Marine band 156 MHz to 157.5 MHz is next, from 157.5 MHz to 174 MHz you will hear police, ambulance, taxis, couriers, local councils, businesses, railway traffic, main roads and many other government and non-government users. Many of the users here are identical to those found on mid band VHF.

UHF AIR BAND 225 MHz to 400 MHz AM

Military aircraft and satellites are the primary users of this band, transmissions for aircraft are in AM, while the satellites mainly use FMN or WFM. Also studio wireless microphones have the frequencies 203-204 MHz FM just outside the UHF airband. Not all scanners can receive these frequencies.

LOW BAND UHF 400 MHz to 470 MHz

Possibly the most crowded of all sections of the spectrum, with hundreds of business users plus amateurs, police, State Emergency Service, airline companies and government organisations packed into seventy megahetz of space. The UHF low band is broken up into the following portions, 400-420 MHz Land Mobile, 420-450 MHz Amateur band often refered to as 70 cms band. From 450-470 MHz the Land Mobile service has primary occupancy of the frequencies. The police Australia wide have 64 channels between 467.850-469.425 MHz and are busy all the time.

MID BAND UHF 470 MHz to 520 MHz

Very popular with businesses, you will hear couriers, plumbers, media groups and hospitals. From 501-505.5 MHz is the mobile telephone service, it is not legal to monitor telephone calls, so if come across a frequency in this service you should keep scanning. From 1991 until 1993 the 500 MHz mobile telephone will be phased out of service, subscribers will be encouraged to purchase equipment for the 800 MHz cellular service.

HIGH BAND UHF 800 MHz to 950 MHz

The home of the cellular telephone service 870-890 MHz, channel spacing is 30 kHz, some scanners do not have access to this step rate. Again you can't listen to telephone conversations so keep going. Trunking is a new system of having as many radio users on the least amount of channels. Basically trunking has either 3 or 5 channels in a system, it differs from the normal single channel network that allows only one user on the air at a time. Trunking is spectrum efficient, with 2 or 4 users per network on the air at a given time. The third or five frequency is used for the computer data that controls the channel allocation. Trunking channels are found from 865-870 MHz and have 12.5 kHz spacing.

There are a number of other guides to follow when scanning the bands, UHF for example is largely repeater operations. The regulatory authorities have designated certain channels for repeater inputs, other for outputs. The spacing between these two frequencies is also determined by band plans.

The frequencies and spacing between them are...

BAND MHz	REPT.OFFSET MHz	OUTPUT FREQUENCY
400-420	*9.45*	*HIGHER*
460-470	*9.50*	*HIGHER*
470-480	*5.20*	*LOWER*
480-490	*5.20*	*HIGHER*
490-500	*5.20*	*LOWER*
500-520	*10.00*	*LOWER*
800-900	*45.00*	*HIGHER*

Simply, if you are monitoring a frequency of say 464.000 MHz, deduct 9.5 MHz from that figure and you have the input frequency (454.500 MHz).

USA NEWS NOT GOOD

From the United States comes some very disturbing news. The Federal Communications Commission (the American equivalent to DoTaC) has opened a formal inquiry into the possibility of banning scanning radio receivers. The banning would target manufacturers,prohibiting them from selling scanners that are capable of receiving police, medical emergency and fire channels. In a Notice to Show Cause, the FCC required makers of scanning receivers to demonstrate why their products should not have public safety frequencies removed. Many manufacturers have stated that the cost of modifying designs would be prohibitive with the likely outcome of them (scanners) being withdrawn completely. Illegal drug operators monitoring federal law enforcement channels is cited as the reason behind the move. Stay tuned for further developments.

Spacing between frequencies is another common problem encountered by those new to scanning, each band has a pre-determined space from one frequency to another. This avoids interference from adjacent services as well as assists in band plans. The spacing is...

BAND MHz	CHANNEL SPACING
30- 50	*10 kHz*
68- 88	*15 kHz*
108-118	*50 kHz*
118-136	*50 kHz*
144-148	*VARIOUS*
148-170	*415 kHz*
225-400	*50 kHz*
400-420	*12.5 kHz*
420-450	*VARIOUS*
460-470	*12.5 kHz*
470-480	*12.5 kHz*
480-490	*12.5kHz*
490-500	*12.5 kHz*
500-520	*12.5 kHz*
820-825	*Trunking input, 1 MHz within group, otherwise 12.5kHz.*
825-845	*30 kHz cellular input*
845-865	*25 kHz*
865-87	*Trunking output, 1 MHz within group, otherwise 12.5kHz.*
870-890	*30 kHz cellular output*
904-950	*25 kHz*

There are of course exception to every rule, however those detailed above are the most common detected while scanning the bands. Stay tuned for "In the Beginning - Part 3", next issue.

MAILBAG

MONITORING PNG

A SCAN reader who has just returned from a trip to Papua New Guinea provides some interesting frequencies and info about the area. The PNG Constabulary can be found on 73-74 MHz, (see next issue for details Ed.), and the St John Ambulance in Moresby on 73.335, callsign P24SJ. Units id as following, BASE=Ops Room HQ, ALPHA=ambulance,ST JOHN=HQ car, BRAVO=St John Association Blind car,RESCUE 1=Rescue Squad vehicle, MOBILE=portables.

Three priorities are used for the dispatch of cars to incidents,PRIORITY RED=Life threatening emergencies, PRIORITY BLUE=Serious cases, PRIORITY GREEN=Routine cases.

For the airband monitor here are some of the VHF AM frequencies used at PNG airports, 125.8 Jackson Approach, 118.1 Jackson Tower,119.3 Moresby Control, 120.9 and 124.1 Moresby FIS, 131.9 QANTAS and finally 6622 kHz Moresby HF.

Thanks to the "Traveller" for the insight into New Guinea comms, I am assured there is more to come.

TRIBAND ANTENNA

Don in Bicton WA, would like to construct a triband antenna and feed it with a single co-axial cable. Unfortunately, I would not recommend the use of tribander, they tend to be more trouble than they are worth. One element can attenuate the other, as well as exhibit poor reception lobes. My recommendation would be a discone or scanning co-linear aerial. However if you still wish to use a tribander, any television co-axial splitter should do the job with some loss within the resistors that make up the splitter.

SATELLITE LOGGINGS

While searching between 261.4 MHz to 262 MHz, Wayne in Busselton WA locked onto transmissions on 261.7 and 261.55 MHz NFM, which is the US Navy Fleet Satellite Communications Network. Other "birds" Wayne has scanned are, the ATS-3 Geo-Stationary on 135.55, 135.575, 135.6, 135.625 and 135.645 MHz, without any success. Wayne would like to hear from other WA readers that have any success with satellite scanning, especially the ATS series.

READERS REPLY

In the March/April '91 SCAN column, Mark from Raymond Terrace NSW requested assistance with frequencies used by the SES and Bushfire Service in the Wyong, Cessnock and Port Stephens areas. Two readers, Henry in Woolgoolga NSW and David from Wyong provide the following, Wyong BFB 163.210, 413.650 as well as Fire Ground 1 172.800 and Fire Ground 2 172.950. Wyong SES 168.820, 168.850, 468.600, 468.625, 468.650 and 467.250. Cessnock BFB 171.930, Cessnock SES have the same frequencies as Wyong as does Port Stephens. Port Stephens BFB uses 163.030 and 162.820 for its communications. Thanks to all those readers for their assistance.

(continued over page...)

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TASSIE TALES

A tip for fellow AR 3000 owners from SCAN regular Jason in Prospect Vale TAS. When monitoring the beacons on the LF bands, (below 500 kHz), he suggests, to avoid the interference caused by the AC power supply, that you use a 12VDC battery such as a car battery or some other non AC source. Are the any Apple Isle readers that can uncover the users of the following frequencies logged by Jason, 462.050, 464.875, 463.625, 474.700, 463.800, 464.550, 462.500 and finally 161.755. It appears VKT is following the path taken by VKA and installing data terminals in their mobiles. While the trials are limited to the Hobart area, it is anticipated, providing they are successful, the terminals will spread across the state.

BELOW 400 MHZ

Who uses frequencies within the range 380-400 MHz? Asks David in Sassafras VIC. The limits you have mentioned David are a part of the larger band 225-400 MHz, which encompasses the UHF AM aircraft band as primary user. Other services, such as satellites, do have small sections of the band however aircraft chew up most of the space. Because transmissions are AM and most scanners receive these frequencies, (380-400 MHz), in FM, it is basically wasted space.

SCANNING TV

A reader, who wishes to be known as the "Australian Yobbo", uses his scanner to listen to television. He states that "these frequencies come in real handy when you lose the sound on your telly". The main TV channels sound carriers are ABC 69.750, ATN 7 187.750, TCN 9 201.750, TEN 10 214.750 and SBS 28 532.750. All are in WFM. AY would also like to monitor amateur radio operators. Amateurs have vast portions of the RF spectrum allocated to them, either on a primary or secondary basis. THE VHF/UHF sections are, 28-29.7 MHz (10 metre band), 50-54 MHz (6 metre band), 144-148 MHz (2 metre band), 420-450 MHz (70cm band), 576-585 MHz (52cm band) ATV and 1240-1300 MHz (24cm band).

NEW ZEALAND UPDATE

Several issues ago, I mentioned the New Zealand police were up-grading their AM VHF channels to FM, as well as increasing their allocations. The new channels are shown as, channel number, repeater output then repeater input. 1=75.425, 78.30625; 2=75.450, 78.33125; 3=75.475, 78.35625, 4=75.500, 78.38125; 5=75.525, 78.40625; 6=75.550, 78.43125; 7=75.575, 78.45625; 8=75.600, 78.48125; 9=75.625, 78.50625; 10=75.650, 78.53125; 11=75.6625, 78.54375; 12=75.6875, 78.56875; 13=75.7125, 78.59375; 14=75.7375, 78.61875; 15=75.7625, 78.64375; 16=75.7875, 78.66875; 17=75.8125, 78.69.375; 18=75.8375, 78.71875; 19=75.8625, 78.74375, 20=75.8875, 78.76875; 21=76.300 simplex; 22=76.400 simplex.

WAGGA "OOO" FREQ'S

A scanfan from Wagga Wagga NSW, has supplied the frequencies used by the emergency services in the southern NSW town. Police have 83.760 and 83.790, Fire Brigade 78.130, with pager and bell tests conducted daily. Finally the ambulance on 76.760, 76.790 and 413.950. Our Wagga reader would like to know the frequency used by Armaguard in the Riverina. Try 493.550 for their operations in and around Wagga. The NSW Police are employing frequencies from the 64 channel allocation in country areas. Search between 467.850 and 469.425 for activity on these bands.

SA POLICE CALLSIGNS

Andrew in Adelaide would like to know the callsign prefixes used by the South Australian Police. ALPHA=STAR FORCE, BRAVO=ADELAIDE, CHARLIE=PORT ADELAIDE, DELTA=PARA HILLS, GOLF 1=MURRAY BRIDGE, GOLF 2=NURIOOTPA, GOLF 3= MOUNT GAMBIER, GOLF 4=BERRI, GOLF 5=KADINA, HOTEL 2=PORT PIRIE, HOTEL 3=PORT AUGUSTA, HOTEL 4=PORT LINCOLN, HOTEL 5=WHYALLA, T=TRAFFIC, O=COMMUNICATIONS, VIXEN=SERGEANT, MITRE=SENIOR SERGEANT, TROJAN=INSPECTOR, ZULU=OVERTIME. That should answer two of your questions Andrew.

NEWCASTLE FREQ'S

Pelaw Main, near Newcastle NSW is where Bruce does most of his listening. He has logged the following frequencies in the area. Newcastle police have a cross band channel of 468.050, this can be monitored almost all over the lower Hunter and Newcastle areas and even in Sydney from some places. Police VHF are 83.850, 83.880, 83.910, 83.925 and 83.955 MHz. Ambulance radio use 76.715 in Newcastle City and the Fire Brigade 78.100 MHz. NEW VKI CHANNELS

The WA Police are slowly switching from their VHF network to the Australia wide UHF channels. Here is the latest on the update. Armadale=467.875, Boddington=467.900, Brand HWY and Gingin=467.900, Two Rocks=467.925, North Inquiries=467.975, Rottnest=468.000, Eastern Subs=468.025, Harvey=468.075, Jarradale=468.100, South West Metro=468.125, Western Metro=468.150, Rockingham=468.225, Pinjarra=468.250, Wanneroo=468.275, Inquiries=468.300, Inquiries=468.325, Lancelin=468.375, Fremantle Beat=468.400, Perth Beat=468.425, Metrowide=468.475, North Wanneroo=468.525, Brookton HWY=468.550, Fremantle=468.700, Mundaring and Kalamunda=468.750, Gidgegannup=468.825, Fremantle=469.000, Midland=469.175, Fremantle=469.300. Thanks again to Alek for the detailed information on VKI.

KENTUCKY FRIED RADIO

The Secret Republican checks in with the frequency used by the Colonel's drive thru fast food outlets in Canberra, 40.490 is used in a similar fashion to the famous McDonalds frequency of 35.020. Still down south, TSR has monitored the Electricity Commission on 42.660 around Yass. This is a point to point link, ELCOM seem to like using low band for links, I know for a fact that skip is a real problem to them during the summer months. Back in Sydney, the Roads and Traffic Authority are using more UHF. The Waterfall to Wollongong Tollway is covered by 462.0125, while the Harbour Bridge control still occupies 465.350.

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STORE SECURITY FREQUENCIES

While shopping in David Jones in Adelaide, a reader notice a great deal of activity amongst the security staff. He attempted to find their frequency using his scanner, however was unsuccessful. He asks SCAN to assist with DJ's channel, as well as other store security frequencies.
Westfield Shopping Centres have 469.7 and 469.975 for centre protection. Coles Stores have 170.640 listed for security. A good deal of security and centre management work also takes place on UHF CB channels. Unfortunately I could not find an entry for David Jones, perhaps an Adelaide reader could help?

NZ CALLING

From the Land of the Long White Cloud, comes a call for help. Lance is searching for a converter to switch his Saiko SC 8000 down to 88-108 MHz so that he can receive New Zealand ambulance and fire channels. Unfortunately Lance there is nothing that I know of that will do the job, maybe someone out there has a circuit for a cheap down converter that will work on the SC 8000.

PROPAGATION

The Newcastle and District Scanner Group has recently formed to promote the hobby of scanning in the Newcastle/Central Coast/Hunter Valley areas. While it's frequency lists will cater only to those districts, they welcome outside membership. If you live in the Greater Newcastle area, or are just keen to swap info with people in the region, drop a line to the Group at PO BOX 728 CHARLESTOWN NSW 2290.

SHACK CLEARANCE

On a purely personal note, I am having a bit of a shack clearout and if anybody is interested in the following scanning/UHF gear let me know. If possible include a telephone number so that I can get back to you.
* **A Yaesu FRG 9600** all mode, 100 channel comms receiver, frequency range 60-900 MHz as standard, however, a frequency converter has been installed to cover the frequencies 500 kHz-60 MHz. Price $650.
* **A AOR 1000 handheld scanner**, frequency range extended, 500 kHz to 1300 MHz. Price $429.
* **A Uniden 760 XLT mobile scanner**, 100 channels, covers mid and high VHF, airband VHF, UHF and 800 MHz. Price $329.
* **Finally, two Icom IC40G handheld transceivers**, reviewed not long ago in CBA. Price $450 each.

All this equipment is in excellent condition.

CONTACTS

NAME Chris NOWLAND
CONTACT C/- The Entrance Post Office, The Entrance, NSW 2261
INTEREST HF, VHF and UHF, mainly SES and BFB.
NAME Brian BUCKINGHAM
CONTACT PO BOX 1076, Potts Point, NSW 2011
INTEREST Weather satellites all frequencies.
NAME Mark TAYLOR
CONTACT PO BOX 62, Milson Point, NSW 2061
INTEREST HF, VHF and UHF users, especially aircraft.

Attention HP 100 and AOR 1000 owners

I have available the instructions to modify the radios for continuous coverage from 500 kHz to 1300 MHz. If you don't mind voiding the warranty of your radio and have a steady hand, a stamped self-addressed envelope is all you need to secure a copy.
While on the subject of AOR 1000s and HP 100s, Allan Muddle, PO BOX 50, DUNGOG, NSW 2420 is making a stronger carry case to fit the aforementioned. He also has covers to fit the PRO 2005/2006 base/mobile scanners from Tandy. If you use the radio mobile then it is subject to scratching and case damage. The Vinyl cover prevents damage and thereby maintaining value in the scanner. All enquiries to the above address, regarding price, etc. If you market a product and would like mentioned in SCAN, please feel free to contact me at the address at the base of the column.
That's it for another couple of months. Don't forget, if you have anything to contribute just put pen to paper and drop me line at the address given below. If you require a personal reply, a stamped self-addressed envelope please. To those readers who are awaiting replies, please hang in there. I will get to you soon.

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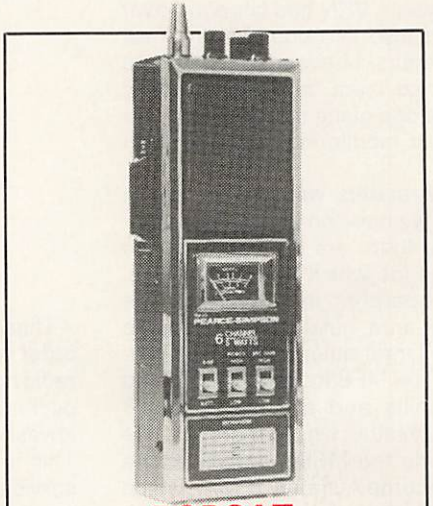

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FIRE BRIGADE TURNS OUT

I have been listening to VKN (the MFB network) ever since my first scanner, but it probably all goes back to when I was at school.

We had a fire station right behind us and pumpers and ladder trucks were always on the go. So as soon as I got into radio, and discovered scanners, I was out there with them. Yes, they are exciting, however, there is another reason for listening to fire brigades. They are often the last to leave any emergency scene and you will hear much more over a fire radio than across the police or ambulance two-ways.

Over the years VKN has changed over to UHF and also introduced many new codes and areas. I have tried to keep up with these, so I am sure the following notes will be one of the most comprehensive guide to monitoring the MFB ever printed.

For those readers who do not live in Melbourne, we have an unusual arrangement in that there are no less than five separate groups which respond to fires. The MFB operates in the Melbourne metropolitan area, but does not extend to some of the larger outer suburbs such as Frankston. The MFB looks after fires and chemical spills and also assists with larger road rescues where there is a fire hazard. Inside the MFB's domain is the Port of Melbourne Authority (PMA), which covers Port Melbourne and nearby dock areas. The PMA looks after itself here, although the MFB responds to reports as 'mutual aid'. Fire and chemical situations in airports are handled by the Department of Transport's RFFS, which has on-site crews at major airports. The MFB also responds as 'mutual aid'. The Country Fire Authority (CFA) covers the entire state of Victoria, except for the MFB area and national parks which are handled by the Fire Service of the Department of Conservation, Forests and Lands. The CFA responds as mutual aid to park fires and, with the SES, also looks after road rescue.

This looks so confusing that you might think, if you come to Melbourne, you should try very hard to avoid being caught in a fire. However, the services do have very strict guidelines as to who helps who, how many appliances turn out in each area etc.

The MFB has 10 channels. Eight are duplex and two simplex for direct work in close situations. In order of channel, with repeater output and input frequencies, these are:

1 - 467.775-458.275
2 - 467.475-457.975
3 - 466.875-457.375
4 - 466.275-456.775
5 - 465.975-456.475
6 - 465.675-456.175
7 - 465.375-455.875
8 - 465.075-455.575
9 - 469.575 (simplex)
10 - 469.900 (simplex).

These 'channels' are not in the sort of order you might expect them to be. Many radio hobbyists, especially beginners, expect channel numbering to start with the lowest frequency and work its way up. This is how CB works and some other services like the national UHF police band. But the MFB channels are all over the place. This is not all that unusual in scanning, especially when services have grown bit by bit or left their change to UHF too late. Often there was only a scattering of channels available, so they had to take what they could get, where they could get it.

The MFB has divided Melbourne into five districts, each with a number of stations with their own numbers. There is also a 'district station' which is the head station of that district - this is marked as 'DS'. Central District has its own channels and the other four districts share two channels between them. There are also secondary channels for large operations or times of heavy traffic.

CENTRAL DISTRICT - ch 1 (secondary ch 4)

1 East Melbourne (MFB HA and DS); 2 West Melbourne; 3 Carlton; 10 Richmond; 35 Windsor; 38 South Melbourne; 39 Port Melbourne; 48 North Melbourne.

Northern District - ch 2 (secondary ch 5)

4 Brunswick; 5 Broadmeadows; 6 Coburg; 7 Thomastown (DS); 11 Lalor; 12 Preston; 13 Northcote; 14 Rosanna; 15 Ivanhoe; 16 Greensborough.

Eastern District - ch 3 (secondary ch 6)

18 Hawthorn; 19 Kew; 20 Box Hill; 21 Surrey Hills; 22 Ringwood; 23 Camberwell; 26 Croydon; 27 Nunawading (DS); 28 Mount Waverly; 30 Templestowe.

Southern District - ch 3 (secondary ch 6)

24 Malvern; 25 Oakleigh (DS); 29 Clayton; 31 Wheelers Hill; 32 Ormond; 33 Mentone; 34 Highett.

Western District - ch 2 (secondary ch 5):

40 Laverton; 41 St Albans; 42 Newport; 43 Deer Park; 44 Sunshine (DS); 45 Spotswood; 46 Altona; 47 Footscray; 50 Moonee Ponds; 51 Keilor; 52 North Essendon.

These districts do not account for all 10 channels. Channel 7 is not allocated, but it is operational and can be heard in use from time to time. Channel 8 is used for maintenance crews and radio workshops. Channels 9 and 10 are also known as 'Fireground 1' and 'Fireground 2' and are

TONY SANTOS has some hot tips for Melbourne monitors, so when that next fire tender zooms by, you can be in on the action!

simplex frequencies used at the 'fireground' or actual location of the situation.

The MFB, like all modern fire fighting agencies, uses many different and specialised 'appliances'.

MOST HAVE A SPECIAL ON-AIR CALLSIGN.

There are 17 in all: a pumper, mobile tender, water tanker, rescue, platform (a 'snorkel'), ladder, combination ladder ('combo ladder'), district pumper, 'hazmat' (hazardous material unit), breathing apparatus, hose layer, control unit, lighting unit, transporter, mobile canteen, Teleboom (also called a 'sky jet' hose) and a foam tender.

You may also hear the 'District Officer' who normally drives an MFB sedan vehicle. The higher ranks are referred to by name, for instance, Superintendent Brown being called 'Mr Brown'.

Appliance callsigns are made up of the appliance name and their station number: eg, Pumper 25 would be from Oakleigh. Because Oakleigh has more than one pumper, these will 'turn out' (be dispatched and be heard on air) as Pumper 25A, 25B and so on. Appliances are also ear-marked as being available for duty within the station area and their callsign is prefaced by the word 'Standby'. So 'Standby rescue 47A' would be the first rescue vehicle that would be sent to a rescue situation in the Footscray area.

HOW DOES IT ALL WORK ?

It might help to consider how the MFB 'turns out' or responds to emergency calls. The MFB's communications centre is located at East Melbourne station and signs with the callsign VKN. This is where all fire calls first reach the MFB. They may be remote alarms, direct requests from the police or any other authority with direct lines to VKN or, of course, via the 000 emergency number. VKN has a computer aided dispatch (CAD) system and the duty operator receiving the call enters the appropriate information into the computer terminal. The computer itself selects the nearest two appliances, and sends the information to these stations by dedicated landline. The station will be 'buzzed' and there will follow a voice announcement and telex printout with the information. This includes the call category, address and Melways map reference and anything else that the station might need.

The station staff press a special 'Acknowledge' button on their console, which sends back a message to the Communications Centre that the call has been received. The first appliance to respond will transmit the 'turnout' information, or repeat the call as on the print-out, over the radio. This is the first time radio has been used in the situation. VKN will then repeat the turnout to the appliance. As other appliances call on, VKN simply replies against their callsign with 'Roger'.

If you're looking for some exciting listening, you'll certainly find plenty when the Fire Brigade turns out for a major blaze. However, restrict your interest to just listening, don't decide to go and "see the fire" as you'll just make the brigade's task more difficult.

IT ALL DEPENDS ON THE AREA

The number of appliances dispatched depends on the area in which the fire is reported and the nature of the report. An automatic alarm in the city will be attended by no less than three pumpers, except for equipment faults which are responded to by just one pumper. A call placed through the 000 emergency number sees the dispatch of three pumpers, two combo ladders and a rescue vehicle. In the suburban areas, two pumpers respond to all calls.

Appliances arriving 'on scene' (the next stage following 'turnout') communicate with VKN using what is called a 'wordback'. A common wordback might be as follows: "wordback, DO Jones, false alarm, stop, 100 Spring Street Kew, code 67". This has identified the officer sending the wordback as District Officer Jones; he has indicated the call was a false alarm, given the address of the call and used a code to indicate that the alarm was accidentally set off.

ENTER THE HEAVY ARTILLERY

The "stop" in that wordback is the first of four wordback categories, and means that the appliance on the scene can handle the situation.

(continued over page...)

SNIPER

THE ULTIMATE VERTICAL BASE STATION ANTENNA

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The SPR-27 Mark 2 was the ONLY base antenna ever rated "TEN-OUT-OF-TEN" by CB Action, and the design remain unchanged from 1976 until we ceased production in mid-1990.

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The SNIPER is the ONLY base station antenna to ever get a BETTER rating from CB Action than our SPR-27, and "TEN-OUT-OF-TEN" was a hard act to follow. No other antenna has even come close!!

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Recommendations from satisfied customers sell more antennas than all our advertising, and in the 1990s the SNIPER is the antenna everyone's talking about.

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The Scantenna-XLR wideband discone antenna covers 25-1300 MHz and is ideal for use with all scanners, including "super-scanners". Check out the specifications . . .

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★ Precision-machined aluminium discone head assembly.
★ 16 lightweight tubular aluminium discone elements.
★ Stainless steel vertical element.
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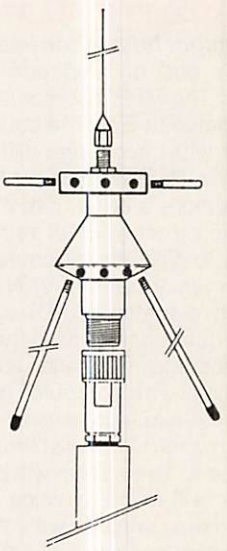
(Test Report in September 1987 CB Action)



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Large industrial fires such as that above usually attract a number of units and a data-file on areas and callsigns will provide a lot of information.

Stay with the excitement when the...

FIRE BRIGADE TURNS OUT

(continued from previous page)

The other categories are: "under control", which would still send a back-up appliance; "not yet under control", in which the District Officer would be dispatched along with a rescue vehicle, teleboom, district station pumper and the two nearest pumpers; and "Assistance Required" which brings in the heavy artillery - all of the above plus another five pumpers, hoselayer, breathing apparatus, control unit and Superintendent and snorkel platforms. Amidst all the other radio traffic, urgent calls can be placed with the prefix of "Red, red, red" which indicates a priority message is to follow.

The calls themselves are also rated. An "alarm generated" call is a fairly obviously one involving a sprinkler, valve monitor or fire alarm; an "incident" refers to a call not directly involving fire - from a petrol or chemical spill to a gas leak or a vehicle crash with persons trapped; a "non-structure fire" is a fire in grasslands or a car alight; and a "structure fire" involves any structure on fire or a fire within a structure.

FIVE CATEGORIES OF MESSAGE

Radio messages in the MFB fall into five categories. Turnout occurs when appliances are making their way to a suspected fire; they call off as they arrive ("Pumper 50 on scene"); wordbacks are sent from an appliance or can be requested by VKN ("VKN to pumper 50, wordback" asks the pumper to let VKN know what is going on); appliances then make their way back to their station ("Pumper 50 and crew returning"); and finally call off once they arrive ("Pumper 50 in station").

Hopefully, this primer into the world of the MFB radio and VKN will give you a new insight into the hard and hazardous work of Melbourne's fire officers.

False Alarm Codes:

60 Non-malicious call, no further information
61 Smoke scare; 62 Incorrect location
83 Controlled burn - fire is authorised and under control
64 Vicinity alarm
65 Steam or gas mistaken for smoke
66 Bomb scare, but no bomb, non-malicious
67 Alarm accidentally tripped
68 Alarm test, MFB not notified prior to test
69 Simulated condition - alarm properly detects problem, but alarm not required
70 Malicious call, no further information
71 Deliberate false alarm
72 Bomb scare, but no bomb, deliberate hoax
80 Alarm system malfunction, no further information available
81 Fault in detector

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RUSSELL BRYANT looks at the latest from Yupiteru the . . .

MVT 7000 HANDHELD SCANNER...IT'S GOOD

Two years ago, Australian scanner enthusiasts had never heard of Yupiteru. Some, including certain members of the editoral staff of this magazine, still can't pronounce the name. The MVT 5000 was the first to offer "super scanner" status in a handheld. It was quickly followed up by the MVT 6000 mini-mobile. Now Yupiteru is offering a handheld destined for big things.

It appeared we were entering a drought, no new scanners to review for the foreseeable future, that was, until the MVT 7000 appeared on the market, albeit quietly. It was November, 1989, when I reviewed the first scanner built by Yupiteru, a handheld known as the MVT 5000. It offered frequency coverage from 25-550 MHz, then 800-1300MHz. Compared to today's (two years later) very wideband scanners, those frequencies seem a little limiting.

Not wishing to be left behind in the rush to develop an extra wideband portable receiver, Yupiteru designed and manufactured the MVT 7000. Apart from the name there is no way this handheld can be compared to its predecessor. It neither looks nor performs the same. Sure, there are certain functions and features common to both models, however, there are extras on the 7000 that I would like to see on all handheld scanner within the same price bracket.

FREQUENCY RANGE IS BETTER

The frequency range of the new model exceeds the old by several megahertz. The MVT 7000 can be programmed with any frequency between 0.1-1300 MHz. Where the 5000 lacked WFM mode for reception of the FM broadcast bands and TV audio carriers, the 7000 now incorporates it. The three modes are near mandatory on receivers these days, together with the ability to select a mode regardless of convention.

The first thing that strikes you about the new Yupiteru is its size and styling. The box-like features of the 5000 have been replaced, rounded panels and corners, streamlined controls together with an overall reduction in size, make for an aesthetically pleasing scanner. The concentric volume and squelch controls are gone, Yupiteru opting for the more versatile individual knobs.

The front panel layout of the MVT 7000 is basically the same as the 5000. First-up is the LCD, the plastic lens covering the display has magnifying properties to assist in reading the display figures and functions. The control and numerical buttons are next, followed by a larger speaker. That brings me to the only complaint about the 7000, the buttons are double subtitled, as well as having their number value alongside. The complaint? It is a little confusing, trying to work out which subtitle is appropriate to the key. Other than that, nothing else to whinge about.

PERFORMANCE IS FAULTLESS

Performance-wise the MVT 7000 is faultless. Like every scanner sold there are some birdies (internally generated signals that lock the scanner up when no signal is present). Sensitivity is quoted in the handbook at .5 microV or better on FM/AM and .75 or better on WFM. I tend to opt for the "or better", it was hearing transmissions a certain well known base scanner wasn't. To reduce interference from strong local signals an attenuator switch, when depressed, knocks 20dB off the signal. The size of the attenuator button is larger than that of the AR 1000, and less likely to be accidentally toggled on.

Some of the features included as standard are AF SCAN, only frequencies with voice modulating them will be locked onto during scan; the like it or not BEEP can be silenced or activated at the discretion of the user; direct frequency access; 10 programmable search banks; program scan; contrast control on the LCD; and selectable search increments of 5/10/12.5/25/50 or 100 kHz as well as acceptable performance below 8 MHz make for a high performance package.

NO GUARANTEES BELOW 8 MHz

Even though I said the frequency range was down to 100 kHz, or 0.1 MHz, Yupiteru can't and won't guarantee performance below 8 MHz. What has to be remembered is the Yupiteru is a scanner, NOT a HF communications receiver. It was primarily designed to receive signals within the VHF/UHF bands. The fact it goes below 30 MHz, the lowest VHF frequency, is an added bonus.

On average, given a current drain of 160mA, the longest period that can be expected between charges is four to five hours. Alas, not spectacular but certainly better than the Icom R1. Yupiteru supplies four 600mAh ni-cad batteries with the radio.

HOW ABOUT A RUBBER DUCKIE?

Again, Yupiteru has included an eight-segment telescoping whip with the 7000. Great, terrific, every handheld scanner benefits in performance when using a telescoping aerial, however, a handheld is portable and portable doesn't mean having a 50 or 60cm rod sticking out of your pocket. How about a rubber duckie?

Apart from the accessories mentioned, what else do you get in your Yupiteru showbag? A carry strap, DC cigarette cord for the car and belt clip are provided.

The key-pad looks busy, pity the manual isn't available in English to make its workings easier to understand.

Conspicuous by its absence is a soft carry case, as one was included with the 5000 I wonder why the 7000 missed out?

The handbook accompanying the MVT is in Japanese. My Japanese is, unfortunately, limited to words like Toyota and Suzuki, however I was still able to operate the scanner simply by following the excellent diagrams.

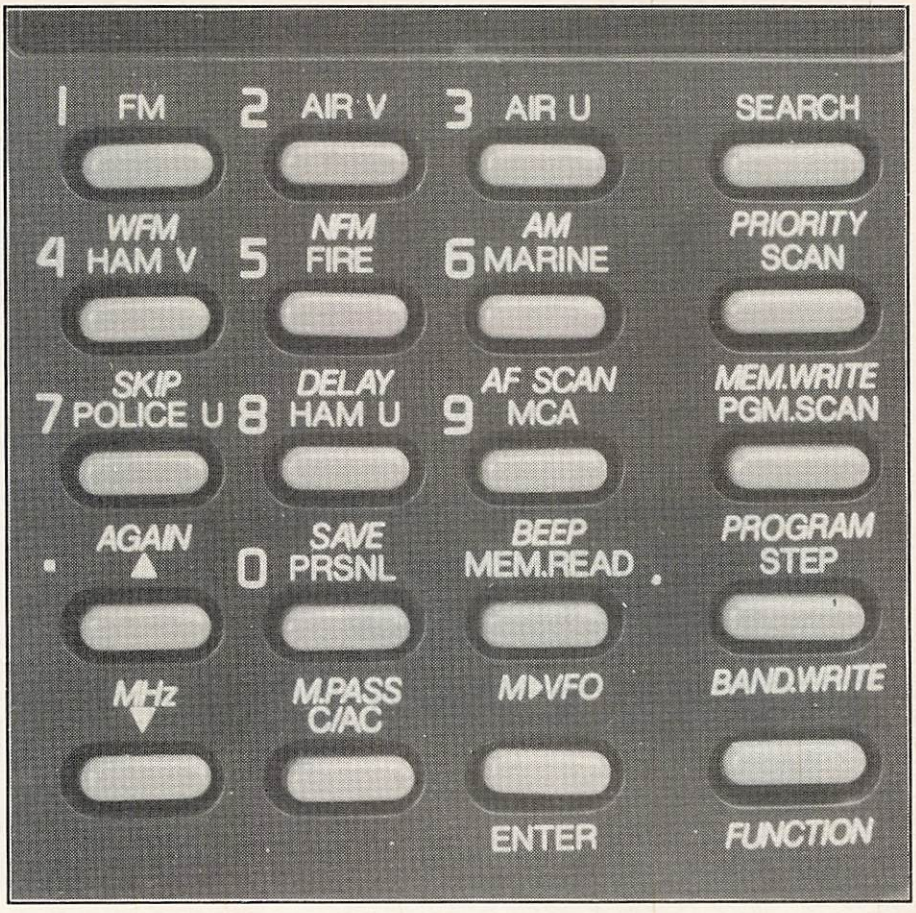
SUMMARY

Overall, the Yupiteru MVT 7000 is a top-of-the-range, high performance broadbanded scanner.

Technology at it's best. Interested?

A visit to any of the Andrews Communications stores as well as possession of $599 and it's all yours.

Thanks to ACS for the loan of the review unit, you can have it back in six months or so.



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1. Bearcat XL100 H/H $359
2. Bearcat Mobile 760XLT $429
3. Bearcat 200XLT $499

SCANNER AERIALS

President P300 AM/SSB CB

Exceptionally good quality and outstanding value in an AM/SSB CB which comes with Uniden's 2 year warranty. It's easy to operate, beautifully constructed and has the extra range which SSB offers. What's more, it's equivalent to the AX-144 and features:

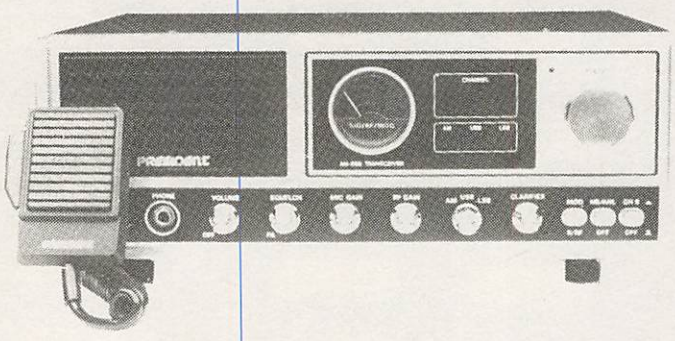
- Back-lit analogue Signal/RF output meter
- Large digital channel display with dimmer control
- Mic Gain & RF Gain controls for maximum flexibility
- Noise Blanker/Limiter helps reduce pulse type noise
- Separate Clarifier control for easier SSB tuning
- Uniden's 2 year warranty

Cat D-1470

Value Plus! $249

A Truly Exceptional Buy!

President P400 AM/SSB CB Base Station



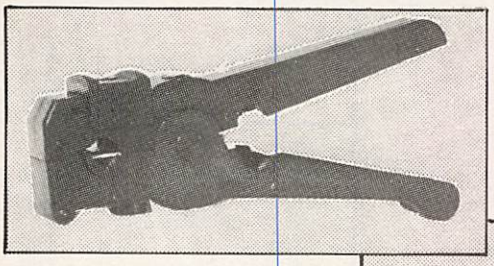
Without doubt, this has to be the best value base station in the country! It's made by Uniden, includes their 2 year warranty and is equivalent to the Uniden Washington base transceiver. Top features include.....

- A large front panel mounted speaker which gives excellent results.
- An inbuilt 240V power supply.
- Large LED channel display & back-lit Signal strength/RF output meter.
- Separate Mic gain, RF gain and Clarifier controls.
- 12V DC lead and mounting brackets for 'mobile' operation
- Front panel headphone & mic sockets (mic supplied)
- Noise Blanker/Limiter switch which helps reduce pulse type noise.
- Uniden's 2 year warranty.

$329 Don't delay, get in for this fantastic deal as stocks can't last at this price!

Cat D-1475

THE RIGHT TOOLS *They Make Installation Easier!*



Coaxial Cable Stripper

Makes stripping coaxial cable easier and neater! Has adjustable (replaceable) blades and it's made from high quality plastic for a longer, trouble free life.

Cat T-3635

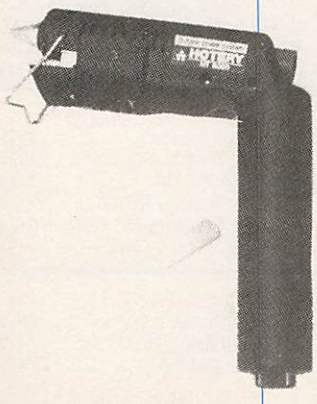
$14.95

Bargain Crimping Tool

An economical, lightweight crimper which can cut, strip and crimp cables quickly and reliably.

Cat T-3525

$4.95



Butane Powered!

Glue Gun

A brilliant tool which allows you to glue almost anything... it's fantastic for laying cables and holding them in place. Comes with spare glue sticks.

Cat T-1420

$49.95

DICK SMITH ELECTRONICS

B1157/MS

The best of....

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From Australia's best!

2 year warranty

Compact Uniden PRO 510e AM CB

Very high quality and extra reliability make the Uniden PRO 510e a popular choice among avid CB'ers. You'd only have to use the PRO 510e once, to realise its outstanding performance and build quality. A full range of features are packed into this compact 155 x 35 x 167mm unit which means you can mount it under most dashboards with ease. DOTC Approved.

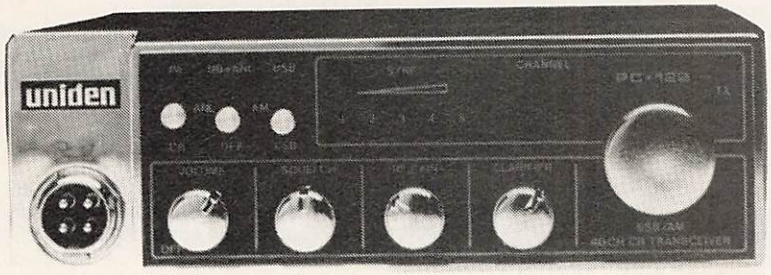
- Switchable noise limiter to reduce ignition noise
- Front panel mic socket for tight installations
- Bright LED channel display
- Signal/power output meter
- Complete with mic and mounting hardware

Cat D-1108

$119

2 year warranty

Uniden PC-122 Compact AM/SSB CB



If space on your dashboard is at a premium, then the Uniden PC 122, with its front mounted microphone socket and compact design, is the solution! It will fit comfortably in most vehicles and looks good in modern dashboards. Superior features include Signal and RF strength indicators plus Squelch and Clarifier controls. DOTC approved.

- LED Signal strength & RF output indicators
- Separate Volume, Squelch, RF gain and Clarifier controls for ease of use
- Receives all 40 channels on AM, LSB & USB
- PA facility (requires optional speaker)
- Includes mic and mounting hardware

$269

Cat D-1715

Our most popular UHF CB!

UNIDEN UH-001 UHF CB

It's easy to see why the Uniden Sundowner UH-001 UHF CB is a proven long time favourite amongst UHF CBers. Not only is it incredibly durable and reliable, but it's also amazingly easy to operate. As well, it comes complete with a quality microphone, mobile mounting hardware and Uniden's renowned 2 year warranty.

- Straightforward mobile operation with easy to use controls and front panel mounted mic socket.
- Easy to read LED channel display with separate Tx/Rx indicator lights.
- Duplex switch for repeater operation.
- External speaker socket
- And it's compact at just 150(w) x 50(h) x 190mm(d)
- D.O.T.C. Approved

Cat D-1806

$299

2 Year Warranty

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online

by Patrick McDonald

ALL ABOUT COMMUNICATION RELATED COMPUTER PROGRAMS

Gee, it's sure nice to be popular!
Every issue sees a whole new batch of enthusiastic messages pouring in, both in the modern 'lectonic style and others on good ole- fashioned paper, and they all make me realize how many of you guys 'n girls now have computers sitting next to your radios and how you're just itching to link 'em up... well, I will do my humble best in this column to advise you how to accomplish just this feat, and try to keep you up to date with the latest developments in radio-related-computer software and suchlike.

Going ONLINE

First of all, let's address the most common question that has found its way across my doorstep during the past year... the very first plaintive plea of the novice PC user who is about to begin a journey down that long, long garden path that I myself took years ago when the microchip first beckoned. So many of you have written to me in eager bemusement, "I've got an MS-DOS IBM compatible computer, just like you recommended. So how do I get it connected with your Shortave Possums bulletin board

To get yourself "online" to a computer bulletin board service (BBS), grab all those fascinating programs and share in the latest radio-gossip you will need two items. First is a piece of specialised hardware known as a "modem". This little black box sits quietly beside your PC with one wire connected to the computer and another into the telephone socket. Its particular brand of magic is to convert your PC's electronic chatter into sounds which the phone line can handle. If you followed the phone line once you were online to a BBS you'd discover another modem at the other end of the connection, between the BBS phone number and the sysop's computer.

Modems are easy to find and, believe it or not in these days of dreary recession, they are becoming cheaper and cheaper. Check out the pages of any Australian computer mag and you will find a number of basic modems available for as little as $299. And many of the larger electronics stores, including DSE and Tandy, also stock modems.

How to buy a Modem

A few hints for buying a modem...like cars, some modems are fast and some are slow. The faster ones cost more but, boy, do they zip you along! Modem speeds are measured in "baud" and while some of the early modems run at 300 or 1200 baud you'll find that 2400 baud is now the standard speed for most dial-up BBS's. The difference is most noticeable when you are reading lots of messages or trying to transfer programs to use on your own PC. Because so many keen people have to share these bulletin boards you only get a limited amount of time online and with a slow modem you'll find yourself constantly running out of time. A 2400 baud modem runs twice as fast as a 1200 unit so you can do twice as much. And if you're calling long distance then believe me, the extra dollars spent on a 2400 baud modem will be worth it in 'phone bill savings

I definitely don't advise settling for one that offers a measly 300 or 1200 baud. A couple of months down the track you'll regret it and will be trading in the slow-mo job. I've seen this happen dozens of times with users on my own BBS. Of course, if you can afford one of the snazzy new modems with speeds up to a zippy 9600 baud, go for it! Naturally, you'll need a special connecting cable to go from the modem to the serial port of your computer, but I'm sure your modem salesman will fix you up with this

What About Software?

Okay, having bought your modem (and we always suggest that you try our advertisers first) all you now need is a little computer program to tell your modem what to do. Some lucky people will already have this "communications software" on their PC, as part of an integrated all-in-one package included in the cost of the computer. In other cases your modem will come with comms software supplied. You can also ask the shop which sells you the modem if they have a simple "shareware" communications program for you. If they do you'll be given one of the old evergreens on a floppy disk.

All of the above do the same sort of job...they get you online to Shortwave Possums, your local radio-oriented BBS (and they're springing up all over the place) and any of the hundreds of other boards around Australia, awaiting your call via telephone and modem 24 hours a day.

Once you've got onto the system you can "download" (transfer across the phone line to your own computer) a number of the newest shareware comms programs and try them all out. I personally recommend the latest TELIX package, version 3.15, and if you like it and want to use it regularly you can send the software author a modest donation.

That's right, shareware operates worldwide on the friendly honour system. If you have a modem and are really stuck for a first-off comms program you can send a 5.25 inch floppy disk to me (at the address at the bottom of this column) with sufficient stamps for return postage and I will fix you up.

And that's it, folks...the whole getting-your-first-modem procedure. You too can be electronically online for as little as three hundred bucks if you already have your computer and a handy phone line.
Do you need anything more...?

Not really, unless the family start complaining about the phone being monopolised every evening by some nut and their computer...then you can can thinkabout getting your own phone line from Telecom! But, truth to tell, it's a simple matter to get involved with computer comms.

Once you're connected to a BBS you will find interesting and can't-live-without-it programs by the hundreds and even thousands. And lots have to do with radio operations...if you ring the right BBSs.

I'm told that CBA masterhack David Flynn will be penning a future article going into more depth on this whole "buying a PC and getting online" routine, so for now let me tell you about a couple of radio related goodies that have just come to hand.

Here's One Clever CAT!

A new program to appear on Shortwave Possums is CAT757D.ZIP, direct from the USA. This shareware program is designed to control the Yaesu FT-757GX Mark II transceiver (but, not the earlier 'Mark 1' model) from any MS-DOS/IBM compatible PC through the 757's CAT interface. Author Richard M. Roux, heard on the international ham bands as N1AED of New Hampshire, has just written the third version of CAT757D, which means all the bugs are squashed and lots of new features suggested by keen users are already built in.

You can program all of the 757's front panel functions from the computer keyboard; entering frequencies, swapping between VFOs, toggling between the ham band transmitter and general coverage receiver, varying the frequency tuning step rate and so on. It even puts an electronic S-meter on your computer screen. You can scan and edit frequencies stored in the transceiver's ten memory slots and store a maximum of 480 frequencies in a computer-based "station directory" which may be scanned in numerous ways.

This last feature is a real big plus and probably the most useful part of the program. Further, alternate frequency files may be loaded into the software as desired to provide database functions limited only by the storage available on your computer's hard disk. The CAT757D program additionally has a built-in terminal program for packet, RTTY and AMTOR modes which allows simultaneous transceiver control

The bare minimum amount of computer power you'll need to run CAT757D is 512 kilobytes of RAM (random access memory), any display from mono through to dazzling VGA and one spare COM port, although two are desirable - all of which is pretty standard for most IBM clones these days

I could spent quite a lot of time describing the various features of this program, but, the above should give you a pretty good idea of what it can do for those of you who own a 757GX II (and there are other programs which can perform the same feats on most other big-name radios from Icom and Kenwood). If you're lucky enough to own this fine transceiver you'd be mad not to at least give this software a whirl. If you don't have a YAESU 757D Mark II as yet but are thinking of getting one, you can still run this program on your computer just to see what it offers since it's shareware you can try it out absolutely gratis (also for nothing)!

FRG-8800 Remote Control

Another new software package, also just in this past week from chilly Oz capital Canberra, is an interesting computer control program for the popular Yaesu FRG-8800 general coverage receiver and written by Phil Harding, longtime BBS operator and an old mate of mine.

The program goes by the label of CAT2 and as the name indicates it too works via Yaesu's handy CAT interface and allows you to control and enhance your receiver via the computer

CAT2 is the second "beta test" version of Phil's efforts and is still being further refined, so some of the planned functions are not yet fully operable and "it may fall over sometimes" according to Phil. Yep, this is a real program-in-becoming and here's the fun of shareware: you can actually give the software author your feedback, participate in the process of getting the bugs out and one day you may see your suggestions up there on the big screen, or at least the little monitor!

Put Yourself On The Map

And now for something completely different: MAPPER3.ZIP, a DX map drawing and propagation program for IBM compatible PCs with EGA graphics capability, written by US software developer Dennis P. Murray of Culver City, California

This is an extremely interesting and damn useful program for amateur radio operators who want to check on the best times for communications with other stations around the world. It should be equally handy for shortwave listeners as well. On start up, MAPPER3 displays a colourful map of planet Earth centred on any location you choose, and caries out propagation predictions based upon a modified "MINIMUF" method (minimum and maximum frequencies that should propagate under the given sunsport conditions). It clearly shows the regions of sunlight and darkness around the world, updated automatically at user-specified time intervals, and can also accept arbitrary times and dates so you can even speculate on future propagation condtions!

MAPPER3 accepts your input of either DXCC prefixes or latitude/longitude values for the user's intended DX target, draws a path on the map from your home QTH to that location, and then displays the range, azimuth and wave launch elevation angle from homebase (for hams who are going to transmit). You can select either short or long paths, set the current sunspot number, specify antenna height, gain, and polarization for both your QTH and that of your poetntial contact, vary the transmit power and enter the minimum wave launch angle to be used.

Press a button and there in front of you is a tailor-made propagation prediction with MUF (maximum usable frequency), LUF (lowest usablefrequency) based upon E-layer screening, and the minimum number of F-layer hops for the minimum launch angle. Predictions of signal strength are made for ham band frequencies which include D-layer absorption, reflection losses and transmit and receive antenna losses due to ground plane reflection at low elevation angles.

Boy oh boy! Sounds like a definite winner, don't it...!

I admit I have played with this particular piece of software quite a bit lately, getting to bed very late some nights indeed, and I think it's loads of fun. A definite bonus is that you even get the original "source code" with the program so if you have some programming knowledge you can make your own individualized modifications to MAPPER3. As a matter of fact the author considers this program "freeware", meaning you can use it, change it, and do what you like with it without any donation required. Bear in mind that MAPPER3 requires at least an EGA colour screen which rules out PCs with mono, Hercules and CGA modes unless you can rewrite the program yourself. If your video capabilities are less than EGA, don't fret, you can still use and enjoy the excellent Geoclock map program reviewed some issues ago (the latest verions, GEOCLK42, is now online at SWP) and do the propagation calculations separately with SWAVE, mentioned in last issue's ONLINE

Don't forget that you are always welcome to contact my own little "Shortwave Possums" BBS via your modem, to get any of the above-mentioned programs or to avail yourself of lots of other features (including the phone numbers of still other bulletin boards, in case you're calling STD and want the number of a local board). My humble old XT PC awaits your computer's call to whisper sweet electronic nothings in its ear, on **(02) 651-3055 24 hours daily.**

Alternatively, sharpen your pencil and write me in traditional fashion at

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I'll answer as I can and as time permits, especially if you include return postage. 'Nufsaid... must run now, and will catch you next issue!

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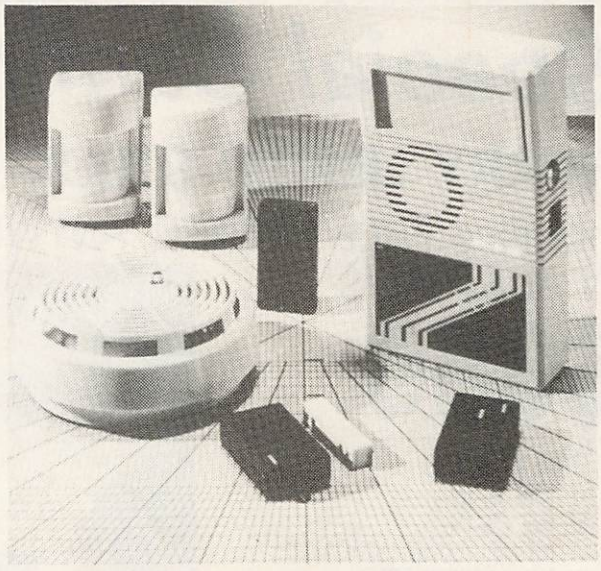

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Sending off the quick QSL card is how many stations like to finish an enjoyable contact. But the recession has bitten deep, and many stations have had to restrict the number of cards they're sending or, worse still, have abandoned QSLing altogether.

Given that situation, it's nice to know that someone is trying to maintain quality while keeping prices in the affordable area - and 100 fully-personalised QSL cards for just $19.20 is definitely affordable. BINT Services has recently introduced a new range of low cost QSL cards to help fight off those recession blues. Most of you will have seen the regular BINT advertisement in both CBA and Amateur Radio Action magazinese. The company has been providing a QSL card service covering both the design and printing of cards for the best part of 15 years and, as it specialises in QSL cards, its experience is just about second to none.

However, even though BINT assures us the costs have been kept to a minimum for bulk orders and printing, the base cost of card stock has increased enormously during recent years and, in consequence, the cost of cards has risen accordingly. BINT even stopped printing two-and four-color cards last year because the prices it was forced to charge were simply too high for all but the ultra-affluent operator - and there's not too many of 'em left! Even single-color cards printed on heavyweight "gloss" stock cost bulk dollars these days, and BINT's proprietor - Maureen 'S', as she's known to her customers - has long wondered how she can produce fully-personalised cards (as against pre-printed ones where the callsign and other details are written in by the operator) at a low cost per 100. The economics of printing cards are such that the costs of artwork, press set-up time and so on are effectively the same for 100 cards as for 1000 cards, which has meant that it was simply not an economical proposition to print the much preferred personalised cards in batches of less than 500. Until now... Using a new printing technique, BINT can now print fully-personalised QSL cards with callsign, station information and all the usual information for just $19.20 per 100 cards - and we reckon

GREETINGS FROM AUSTRALIA

QRV123

OPERATOR: Johnny B. GOODE
QTH: P.O. Box 422, Gosford, NSW 2250
TRANSCEIVER(s): Cobra 148GTL, Washington Base
ANTENNA(s): 3 Element Beam

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CALLSIGN	DAY	MONTH	YEAR	TIME	CHANNEL	MODE	R	S

PLEASE QSL ☐ ☐ THANKS QSL

they look great! The new cards are an addition to the menu - the original range of custom cards on heavyweight stock and two varieties of pre-printed cards are still available, although the new line of downright cheap personalised cards is sure to grab the lion's share of business. So you don't have to mutter the "I don't QSL" excuses to the other stations any more. The cards measure 14cm x 8.5cm and are available on whire or colored card-stock with a quick turn-around from receipt of order to delivery of cards.

Send a 75 cent stamp to BINT Services, PO Box 323, Cheltenham, Victoria 3192 to get a sample of the new cards along with the full range of pre-printed and heavyweight custom cards and see for yourself. If you're serious about buying QSL cards you won't do better anywhere...

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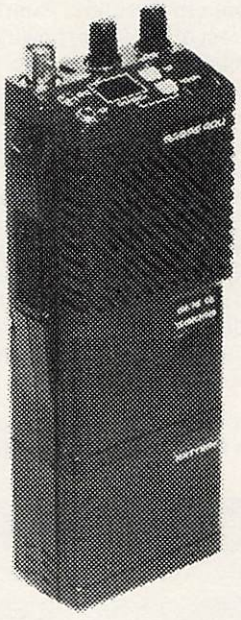

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BRITISH WEST INDIES

MONTSERRAT ISLAND DXpedition

Even though we are now halfway through 1991, there still are good DXpeditions coming on-air from time to time, some publicised well in advance while others surprise us by appearing practically unannounced.

Never one to rest on his laurels, prominent Puerto Rican DXer Ozzie, the 11-AT-116, decided it was time to activate the tiny British possession of Montserrat in the British West Indies. After the success of the Desecheo and Anguilla Island operations, which were team efforts, Ozzie decided to go it alone to neighboring Montserrat from his home in Carolina, Puerto Rico.

The rest of the team, however, were still very much involved in the preparation. Ellis, the 11-AT-110, was busy fabricating a suitable wire dipole emergency antenna as a back-up to the main antenna, an ANTRON-99 omnidirectional vertical. German, the 11-AT-110, was designing the QSL card to be issued and was kept busy with artwork and photography, while Carlos, the 11-AT-121, was placed in charge of editing and word processing the DXpedition details. Montserrat is a tiny 102 square kilometre island in the Lesser Antilles group - part of the Leeward Islands in the West Indies chain - and is sub-tropical with heat and humidity being eased somewhat by trade winds. Temperatures average around 27 degrees Celsius with an average annual rainfall of 1500mm.

Montseratt is a British Dependent Territory, and the Governor, who is the representative of the British monarch, presides over the Executive Council.

BRITISH WERE FIRST THERE

British settlers first arrived on Montserrat in 1632. Between 1871 and 1956 the island was part of the Leeward Islands Federation. In 1960 a constitution was formulated and introduced, and an Administrator appointed (later redesignated Governor). This small island nation encountered a major problem in August, 1986, when conflict arose between the Church and State over the inclusion of a casino in a EC$50 million dollar tourist development project at Little Bay. The Government's decision to deport an Anglican priest for interference in political affairs led to widespread strikes. The Priest later left the island voluntarily.

Over the past few years, there have been some rumblings made about severing ties with Great Britain and obtaining independence. The Chief Minister, John Osborne, has long advocated independence, but after the need for reconstruction aid due to the devastation caused by Hurricane Hugo in 1989, a planned referendum on independence was postponed.

Tourism is an important source of revenue for Montserrat and in 1988 a total of 38,290 visitors were recorded. Education is free and in 1986 there were 14 schools with 2388 pupils and a technical college with 53 students registered.

As mentioned earlier, the total area of Montserrat is only 102 square kilometres and the statistics for the 1987 population census recorded 11,990 residents. The capital of Montserrat is Plymouth, where approximately 2000 people live.

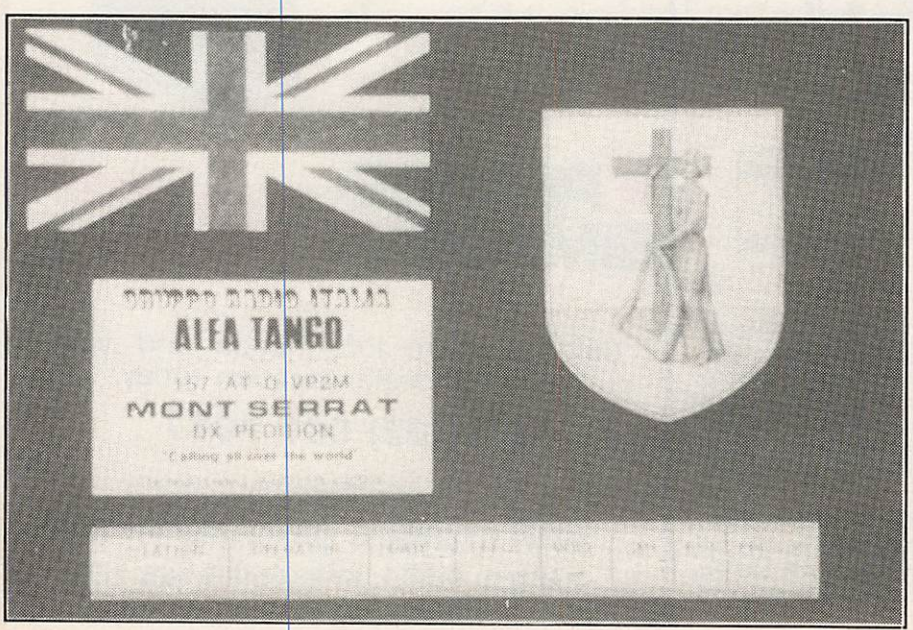
As only 50 per cent of Montserrat's potential agricultural land is under cultivation, the Government has made agricultural development a priority. Light industry, which accounted for about 70 per cent of the total value of domestic exports in 1987, has also been encouraged with particular emphasis on the reactivation of the cotton industry.

Financial Services (off-shore banking), which had provided annual Government revenue of more than EC$1.2 million in the late 1980s, contracted sharply after investigation into large scale fraud in 1989. Only a handful of banks were still operating in 1990 thus reducing government revenue considerably.

The currency on Montserrat is the East Caribbean Dollar (EC$) and is at a fixed rate, since 1976, of US$1 = EC$2.70. There are 203 kilometres of secondary unsurfaced roadway, plus 42 kilometres of rough bush tracks.

Montserrat is reasonably self sufficient. In 1985 there were 3500 head of cattle, 1000 head of pigs, 11,000 head of sheep and goats with poultry estimated at 50,000. The fishing catch averages around 200 metric tons per annum. The main airport is Blackburne at Trants, 14 kilometres from Plymouth.

The official QSL card issued to those who were fortunate enough to secure a contact with Ozzie, operating as 157-AT-0-VP2M on Montserrat during February of this year.



DXPEDITION WAS BASED AT PLYMOUTH

Ozzie decided to base his DXpedition station at Plymouth and arrived on Thursday, 21 February, 1991. He rented a car and drove to the operating location, a room in a guest house just outside Plymouth. It didn't take Ozzie long to erect the antenna and set up his Ranger AR-3500 transceiver with around 100 watts of output power. With the Antron-99 guyed

down and with a good SWR report, Ozzie proceeded to activate Montserrat with the call sign of 157-AT-O-VP2M at 2230z on that day. The first progressive number went out to Joe, the 2-AT-420 in North America, and Ozzie soon found that the 11-metre band was wide open. The log started to fill with contacts continuing into North America followed by Asia, South America, Europe, Africa and the Pacific. In one and a half hours Ozzie had worked all continents (WAC). With the WAC under his belt, Ozzie continued and before long a pile-up developed as word got around that he was active.

TRANSMISSION RESUMES

On Friday, 22 February, Ozzie resumed transmissions at 0001z or 2001 local time in Montserrat. He found the band again was wide open and good signal reports were being exchanged both ways. There was the added surprise of a "short skip" opening and thus many contacts were made into neighboring Caribbean countries. At 1000z or 0600 local, Ozzie was in for another surprise which was to put him off-air for a short time. Due to the semi-rural location that Ozzie was staying in, a passing bull decided to check out the Antron-99 antenna and thus tampered with the guy wires sending the antenna crashing into surrounding bushes!

Ozzie rushed outside to see why the SWR had risen sharply and noticed the antenna was down. With the bull seemingly a safe distance away, Ozzie decided to try and re-erect the fallen Antron-99. He attempted to raise it and tie the nylon guy wire but soon found he had company, the bull having spotted him then deciding to launch an attack. The end result was a frightened DXpeditioner running for his life towards the guest house, however, the bull was making good time until Ozzie opted to bound over a nearby fence.

EXPERT ADVICE WAS REQUIRED

The bull now was in total command of the area which surrounded the antenna location so Ozzie decided to acquire some expert advice on the matter. A short time later, with the help of a local sheep herder, the annoying El Torro was chased away from the antenna site and a formal complaint was issued to its owner. The antenna was soon raised once again and Ozzie was soon back on-air filling the log sheets. Some interesting contacts made on this Friday were: 33-AT-224 in Alaska, 286-SR-03 on Juan Fernandez Island, and 313-SR-O1 in the USSR. Ozzie's log tally was now 324 contacts clear.

On Saturday, 23 February, Ozzie appeared back on the band at 0001z and it was soon evident that the propagation path was a little erratic. The bank was wide open towards the northeast just before noon Montserrat time, and the strongest contacts were made on the path to North America and northern Europe simultaneously. The pile-up was so bad the meter remained in the red section for quite some time. During the afternoon the band switched towards western Europe then to the south of Europe and with the noise level rising considerably it was becoming difficult for Ozzie to decipher who was who in the pile-up.

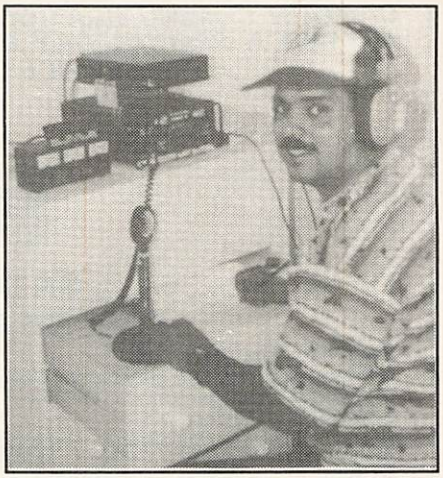
PLENTY OF CONTACTS MADE

During the evening the band switched about again, firstly from the north and south but then to the west, many contacts were made into both the north and south Pacific region along with Central America. Australia and New Zealand dominated the band during the night time path (Montserrat time) and interesting contacts were: 303-AT1O1 in Azerbaijan, 80-AT-108 & 80-AT-114 on San Andres Island, 64-AT1O1 & 102 in Senegal, West Africa. The tally for the log was 565 contacts all up to date. Moving on to Sunday, 24 February, Ozzie found that Plymouth was subjected to a power blackout at 1205z. Information obtained suggested that the power would remain off for a further six hours, so Ozzie had no alternative but to pack the transceiver into the rental car, along with the emergency back-up wire dipole antenna that Ellis had made back in Puerto Rico just for such an occasion!

Ozzie went straight to the summit of Saint George Hill, which is about 1200 feet above sea level, an ideal DX location, and set up station via the rental car and the emergency antenna. Using the trunk of a nearby mango tree, Ozzie soon erected the wire dipole and somewhat later than expected, 1532z to be exact, 157-AT-O-VP2M was once again back on the 11-metre band ready to go.

Now operating off 12 volts DC to keep the station on-air, Ozzie had to leave the car engine running to keep the amps up to the battery via the alternator, and although a little cramped operating from the mobile, Ozzie managed to still fill the log sheets and thus keep the many DXers happy who had been waiting for him to appear. Seven and a half hours later Ozzie decided to head back to the guest house hoping that the AC power was back on, and when he returned he found that this was the case, much to his relief! Notable contact of the day was one with 164-AT-378 in Togo, Africa. The tally in the log to date was 755 contacts all up, not a bad effort.

But all good things must come to an end, and on Monday, 25 February, Ozzie commenced transmission at 0001z and found that the S meter again needed no encouragement whatsoever to go into the red scale. The band was healthy and the majority of contact numbers were awarded to a throng of European DXers who were waiting eagerly for the chance of a contact with the DXpedition on its final day. Outstanding contact of the day went to Osvaldo who was signing as 1-AT-9OO portable 214-AT in the Congo, Africa. Time flies when one is having fun and soon Ozzie was out dismantling the antenna (minus the bull!) and packing the gear away ready for the trip home to Puerto Rico.



Ozzie, the 11-AT-116 operating as 157-AT-0-VP2M, seen here at the controls of his DXpedition station.

825 CONTACTS TO 87 COUNTRIES

The end result from this one-man D-Xpedition was a clear total of 825 contacts made all up in 67 different DXCC countries located in all continents (WAC). The Ranger AR-35OO transceiver was put to rest, packed away along with the much appreciated emergency antenna made by Ellis, the wire dipole (12AWG). Overall it was a splendid operation, considering it was a solo event and not multi-op as are most DXpeditions. Ozzie did quite well considering some of the problems that had arisen along the way adding a little flavor to his stay in Montserrat, British West Indies. I am sure that many DXers appreciate the effort and professional standard of operation demonstrated during the activation of 157-AT-0-VP2M.

My special thanks go to Ozzie, 11-AT-116, for providing details of the D-Xpedition, and of course to German, 11-AT-110, Carlos the 11-AT-121 and Ellis the 11-AT-122 for their dedication and work involved behind the scenes of the initial operation, thus making this an exclusive for readers of CB Action.

73 - Jack Haden

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dxlogbook

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WHAT'S HAPPENING IN THE WORLD OF SHORT WAVE RADIO...

All times are quoted in UTC (same as GMT) and all frequencies in kHz unless stated otherwise.

Since my last column, propagation has been severely effected due to increased solar activity. The print media have carried comments from scientists and reports from users of the frequency spectrum of distruptions to normal communications. American observers even issued an alert that the "Northern Lights" may be seen as far south as Florida. This sort of unpredictibility is what HF radio is all about. So if you've missed your regular DX program or can't find that shortwave station don't blame your radio or the neighbours' TV, it may be nature's way of telling you that she rules the airwaves.

Latest Sked From The Red-Cross

To the end of August 1991 the ICRC will be on the air to our part of the world at the following times: to Australasia from 0740-0757 on 9560, 13685, 17670 and 21695 on 1/7, 4/7, 29/7, 1/8, 26/8 and 29/8; and to South and South-east Asia between 1310-1327 on 11695 (via Beijing), 13635, 15570, 17830 and 21695.

News From The Beeb

Just released is The BBC World Service Transmitter Guide.

This free booklet has more that the normal BBC skeds, it lists times and frequencies by transmitter site - a very handy way of finding out when the "beeb" is and isn't broadcasting to your target area. To get your copy write to **BBC World Service Transmitter Guide, PO Box 76, Bush House, Strand, London WC2B 4PH, UK.**

While the BBC doesn't have a DX program like other international broadcasters their weekly ten minute program "Waveguide" does give some insight into how the BBC works. Waveguide is aired on Mondays at 0530 on 9915, 9640 and 5975; again at 1630 on 15260 and 9515; on Tuesdays at 1115 on 15220, 9740, 6195 and 5965; and on Thursdays at 0130 on 9915, 9590, 7325, 6175 and 5975.

Fellow CBA journo and SWL Patrick McDonald tells me that his best signals come from the Monday 0530 transmission on either of the 9 MHz outlets.

It has also been reported that the BBC is unhappy with conditions China will place on their Hong Kong relay station when the territory is reclaimed in 1997, and as I reported two issues ago they are now looking seriously at establishing a new site in Thailand.

Good Signals From Radio Pyongyang

The current Sked for Radio Pyongyang in English is as follows (all transmissions are 50 minutes duration): to South-East Asia and India daily from 0400-0450 on 15180, 15230, 17765; 0600-0650 on 15180, 15230; 0700-0750 on 15340, 17765; 0800-0850 on 15180, 15230; 1300-1350 on 9640, 13650 and 15230. To the Middle East and Africa between 1500-1550 on 9640, 9977; 1700-1750 on 9640, 9977; 2000-2050 on 9640 and 9977; to Europe 1500-1550 on 9325, 11760; 1700-1750 on 9325, 11760; 0300-0350 on 6576, 9345; 1300-1350 on 9325, 9345; and to the USA from 2300-2350 on 11700, 13650; 0000-0050 on 11335, 13760, 15115; 1100-1150 on 6576, 9977, 11335; and 1300-1350 on 13650 and 15230.

Voice Of Turkey

From Bruce MacGibbon, reporting on the International Shortwave Echo over the Fidonet computer network, The Voice Of Turkey has English broadcasts as follows: to Europe between 2000-2100 on 9795 and 2200-2300 on 9685, both with their 250 kw transmitters; to South-West Asia on 9675 between 1230 and 1300 using 500 kw; to Australia on 17880 at 2200-2300 and 0300-0400 with 500 kw and finally to North America on 9445 between 2200-2300 and 0300-0400, both with a 500 kw transmitter.

Antenna Tips From RCI

There has been much publicity in the world's DX press about the demise of Radio Canada International but, before they went RCI sent me a copy of their latest publication. This free 16 page booklet is just what you need if you're starting off in the world of DXing. In a pleasing not-too-technical approach it explains how radio waves travel around the world, what the aerial does and how you can improve your shortwave reception. It also details five common antenna designs together with a basic diagram showing you how to build your own. For your copy of the excellent **RCI Antenna Handbook write to RCI at PO Box 6000, Montreal H3C 3A8, Canada.** You may also want to ask for their SIO code sheet which explains how to rate signals when writing reception reports.

World Harvest Radio's Summer Sked

George Jacobs provides WHRI's latest sked, which targets the eastern coast of the USA with the following transmissions: 0000-1100 on 7315; 0800-1100 on 7355; 1100-1400 on 11790; 1100-1500 on 9465; 1400-1600 on 15105; 1500-1700 on 9465 (Mon-Fri); 1500-1700 on 21840 (Sat/Sun); 1600-1700 on 13760 (Mon-Sat); 1600-1700 on 15105 (Sun only); 1700-1800 on 15105; 1700-0000 on 13760; 1800-2300 on 17830, and 2300-0800 on 9495.

English From Belgrade

Radio Yugoslavia, born 46 years ago now and broadcasting in 10 foreign languages over 96 frequency-hours, has announced that their transmitters aren't fully utilised and are available for rent to "interested partners". Meanwhile you can catch their latest English broadcasts to Australia between 1200-1230 on 21600, and at the same time on 17740 to Central Nth America and 17725 to Asia, 1830-1900 to Europe on 5960 and to Africa on 15165. 2100- 2145 to Europe on 5960 and 11735. Transmissions on 5960 are 250 kw while others are 500 kw.

Magazine Round-up

The latest edition of the DX POST reports on the rejection of an Aboriginal land rights claim lodged by the Kenbi people for territory including Radio Australia's site at Cox Peninsula near Darwin. And in OZ DX Sarath Weerakoon reports hearing Damascus' External Service on a new frequency of 7500 at 1600 in parallel with 15095, carrying the "Voice of Palestine" from 1630- 1730 and "Voice of Iraq" between 1800-1900. Hanoi is using 9840 and 15010 at 2030 with its external service in English. Argentina and RAE Buenos Aires carries their Japanese service at 1010 on 11710 with a mixture of Argentine music and voice. Radio Difusora Nacional, Bogota is on 17896.5 at 2155 with full ID, promos and station slogan followed by news in Spanish.

English From Norway

To the end of September Radio Norway has English programs each Saturday and Sunday on the following sked: 1200 to South Asia, India, and Australia on 21695 and to the Middle East and India on 17820; at 1900 to Europe and Africa on 15175 and the Far East, Australia and New Zealand on 17730; and at 2200 to South America, Australia and New Zealand on 21705.

More Gear From Sangean

Access Communications has just released Sangean's new SG-621 portable sw receiver. The radio incorporates both analogue and digital displays, a cross between the old and new technologies. It runs off three AA penlight batteries or an optional external 4.5 volt power pack. Sangean have also included a low battery indicator, snooze, sleep and timer/alarm. With seven shortwave bands (plus AM and FM stereo through headphones) and dual time clocks so you can set both local and UTC time, and priced at a very affordable $129, it's a handy little radio for the novice and first-time SWL. For more details call Access on (02) 417-5311, fax (02) 417 6976.

That's enough this time around. Remember, DX LOGBOOK is not just about shortwave stations but about what YOU want, so drop me a letter and tell me what you'd like to see here. Constructive feedback, news and questions can be sent directly to me at...

PO Box 108 Minto,
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enclosing an SASE for reply.

hf utilities

with Bob Bell

WHERE TO LISTEN and WHAT'S BEING HEARD

QSLing, UTE STYLE

Regular utility traffic correspondent "Henry" took the time and trouble to send me a copy of a very pleasant reply he received to a signal report and QSL request he dispatched to the US Coast Guard's Master Station Pacific, San Francisco. The USCG was unable to verify Henry's excellent report due to policy, but in lieu of this provided a wealth of information about its station and its history.

Now known as CAMSPAC, or Communications Area Master Station Pacific, the facility utilizes a vertically polarised omni-directional antenna array with full 360-degree orientation, with Collins-Rockwell HF80 series transmitters feeding the sticks.

From their letter to Henry, the station staff appear to genuinely value the signal report, which leads me to the subject of utility monitors who actively pursue QSLs. Utility QSLing is a whole new ball game from the hobby as applied to the shortwave or mediumwave broadcast bands. I freely admit to having abandoned all forms of QSLing due to the rising expenses involved, but for those among us willing to cope with the never-ending drain on funds, it is a definite "way to go" if one is to achieve the level of confirmations they desire. Many ute stations, such as coast guard, hero air/ground, volmets and military bases, do not and would not ever print official QSL cards, although admittedly there are a few exceptions to this. Staff time is very valuable, as these people are in the shipping or aircraft business or are military people, and they don't really have time to waste.

PFCs - THE EASY WAY

So instead of sending them a QSL request written in similar style to that which you would send to a regular shortwave broadcast station, a very special approach is required - the "prepared form card" or PFC. This is a QSL card prepared by you, the monitor. It includes all details of the intercepted transmission such as date, time, frequency, mode, signal strength and additional comments.

"That's what I send to shortwave broadcast stations," I hear you cry! Well there is more to a PFC than just that. You actually TYPE the reply from your target station back to you, while leaving room for comments by station staff and extra room for official stamps etc. A PFC frees the staff from much of the work in typing special replies to your QSL request. Note that for recording the signal strength, some ute listeners choose to use a strength/readability code on a scale of 1 to 5 rather than the full SINPO code. This simplified code is as follows: strength 1, unable to copy; 2, barely readable; 3, reasonable; 4, good; and strength 5, excellent copy. When there has been QRM or QRN (man-made or natural interference) spell this out in plain language in your "comments" section, along with information on any signal fading which may have occurred. In the days when I used to QSL, the return rate from ute stations who received my PFCs was a staggering 72 percent, which for utility stations ain't bad going!

CALLSIGNS FROM FLEET SUPPORT

Mr George Washington of Fleet Support, Naval Air Station Nowra (NSW), has supplied callsigns for the Learjet fleet operated by this civilian company which contracts to the military for target towing and gunnery practice. Jets used in RAAF operations sign as SPIDER or COBWEB, with BALDOCK used for Naval exercises. All three jets are equipped with HF radios and when working with the forces are often heard on military channels. In addition, they have a tactical company VHF channel of 133.3 MHz. Several of the Fleet Support aircraft are ex-Wards Freight Express, such as VH-SLJ and VH-WFE. The aircraft fly with targets towed behind them at distances of as little as 300 metres right up to 9000 metres, dependent on the experience of the shooters, the type of ammunition (cannon or missile) and the agency being serviced.

On the subject of aeronautical call signs, here are a few more for you, confirmed with the assistance of WA reader and ute monitor Greg Wilson. ASTRA and THOR are US Air Force B-52's moving from Diego Garcia to Guam during the recent Gulf conflict; HOSER are KC135 tankers operating from Clark AFB in the Philippines with STUK being KC-10 tankers, and MEDEVAC are DC-9 Nightingales. Locally, RAAF uses the callsign HUDSON for HS-748s operating from their base at East Sale. And last, but by no means least, the very intriguing call DESTROYER BLACK was used by SK70 "Blackhawk" helicopters during a recent exercise with the elite SAS.

There's neither time nor space to waste, so it's straight into our latest Utility Logsheet. I welcome your own contributions to this column, especially if you can provide us with RTTY and fax loggings, but we need you to use the same format as you see here (frequency, time in UTC, mode, callsign and a brief description of the traffic monitored). You can also tell me your name and whether or not you wish to be credited. So warm up the radio, sharpen the pencil and write to ***Bob Bell's HF Utilities, PO Box 301, Chester Hill NSW 2162.***

UTILITY LOGSHEET

(all frequencies in kHz)

* **2164 1445z USB** Australian fishing trawlers talking about retrieving their nets (Anonymous, NSW)
* **2863 0932z USB** Honolulu Radio with volmet for Hawaiian islands of Hilo, Honolulu, Maui ("Sunset", NSW)
* **3417 1631z USB** Unknown spy or numbers station repeating "Alpha Romeo Tango" followed by individual letters and numbers, read by American female (Anonymous, NSW)
* **3467 1634z USB** New Zealand 114 working Sydney Radio at flight level 330 (Bob Bell, NSW)
* **5505 0806z USB** volmet air terminal weather for Shannon, Prestwick, Heathrow, Gatwick, Manchester and Amsterdam ("Henry", NSW)
* **5643 0753z USB** Qantas 3 ground check wkg Sydney, selcal code DK-BK, VH-EBV, signal strength S5 (John Webb, SA)
* **5643 1452z USB** Brittania 609-Alpha, a Boeing 767 registration G-BRIG, wkg Sydney Radio, Cairns bound for Auckland, Sydney gave primary 5643 and handed off to Auckland at next position. Selcal watch EG-KM (Bob Bell, NSW)
* **5658 1903z USB** Karachi Radio Pakistan wkg Malaysian 861 bound for Bangkok with position report, selcal FM-FK. Also copied Emirates 702 selcal DM-AJ bound for Dubai (Bob Bell, NSW)
* **6512.6 1655z USB** Unknown yacht with Radphone call placed from solo woman on board to husband, both American; woman expressed concern about rounding Cape Horn as yacht had "some damage" (Roger O'Dell, NT)
* **6522 1953z USB** Bundaberg Radio wkg American yacht, advising how to find mouth of river and to call Air/Sea Rescue on international ch.81 for Customs & Immigration Service ("Constantino", NSW)
* **6556 1838z USB** Colombo Radio Sri Lanka wkg Lufthansa 779 at FL310 climbing to FL330. Aircraft also had contact with Colombo Control on 121.9 MHz VHF.(Bob Bell, NSW)
* **6693 0525z USB** November 5 Delta wkg Zero Zulu Romeo, saying "contact your station", but nothing was heard from Zero Zulu Romeo (Steve Reakes, NSW)
* **6693 1813z USB** Oscar India Whiskey Whiskey calling 6-India Oscar-4, advised he was at 18N/152 E and asked "have you received my tracking info. and bulldog report?" (WHAT?) (Anonymous, NSW)
* **8127 1748z USB** Mossad Israel spy numbers stn, female with English accent repeating "Charlie India Oscar 2" ("Henry", NSW). (I have studied this one and pass on the following observation..."Charlie India Oscar" is the callsign of a field agent being called by control. Said alone this means "there are messages for you, change to our pre-assigned operational frequency to receive"; if the number 2 is suffixed to the letters it means "no messages". The call is repeated for hours because it is uncertain when the agent can listen for traffic - Bob Bell)
* **8161 0544z USB** Nowra Control, Royal Australian Navy station wkg "Rushcutter", advising they were shutting down circuit. Both stations loud & clear (Anonymous, Qld)
* **8175 0752z USB** Unknown marine wx report, a male voice giving weather details followed by his advice that "the weather is fine except when it's raining!" (Col Smith, NSW)
* **8477.2 0655z CW** Canberra Radio VIX with WA high seas weather

(Ron Johannsen, WA)

* **8722 2228z USB** Sydney Radio VIS on Radphone Ch 802 placing a call through to vessel "Endeavour" re: visiting the ship in Jervis Bay the next day. Also copied was the "Captain Damper", callsign YJXY9) (Paul Sebastian, Vic)
* **8765.4 0608z USB** Coast Guard ComCen in Portland, Oregon telling "USS Watch" to QSY 8774.7 ("Sunset", NSW)
* **8805.7 1207z USB** WLO Mobile Alabama with weather for shipping, featuring latitudes/longitudes of approaching front and then standing by for any ship traffic (Bob Bell, NSW)
* **8825 1934z USB** Santa Maria Radio (Cape Verde) wkg aircraft "Gold 88" at position 38N/15W at FL270... a real "DX" report from Ed Flynn of San Rafael, California USA. Thanks Ed!
* **8867 0600z USB** East-West Airlines Fokker F28, callsign "New South 811" wkg Sydney Radio as emergency traffic. Pilot requested long approach to Sydney Airport, with engineers advising a slow descent to runway 16. 811 advised that stabilizer was frozen, engineers said it should un-freeze after 30 minutes at "plus temperatures". Aircraft maintaining FL150 with emergency services not yet required. Engineers came up on Sydney Control frequency 129.8 MHz. This is a very good joint catch by two readers, Dean McFarlane of SA and Trevor Bloy from Victoria... well done, both of you!
* **8867 2358z USB** Ansett 32 wkg Sydney Radio, advised to "call Sydney Control 129 decimal 8, five minutes prior to Lotra" (Bob Lopaka, NSW)
* **8876 2035z USB** Helicopter VH-FHV wkg Sydney Radio, cancelling "sarwatch" (search and rescue watch) one mile south of Mt McCudgeon, wherever that is! (Mark Taylor, NSW)
* **8879 1726z USB** Aircraft Singapore 405 wkg Cocos Radio with selcal check, offered code AH-JM (Mark Taylor, NSW)
* **8879 1727z USB** Zambia Radio wkg Lilongwe Radio (Mark Taylor, NSW)
* **8903 2102z USB** Unknown craft wkg Luanda requesting selcal check on AC-FK. Aircraft gave its registration as Z-WSB. This heard by Mark Taylor, who notes that the "High In The Sky" frequency register lists selcal code AC-FK as belonging to Z-WMJ. That's quite possible Mark, selcal is frequently changed around... Bob.
* **8921 1735z USB** US Army stations, QTH unknown, talking about "setting up the co-ordinates of the target" (Robert Stevenson, WA)
* **8930 0610z USB** United 815, a Boeing 747-400 which flies non-stop Los Angeles to Sydney, wkg Sydney Skycoms with phone patch to United Operations Sydney. Info given to Sydney included ETA of 0810z, arrival on runway 34 arrival and gate at Bay 21. ("Henry", NSW)
* **8930 1714z USB** VR-CKO aircraft wkg company, unknown, via phone patch through Stockholm Radio (Mark Taylor, NSW)
* **8960 2019z USB** Air Europe 009 to company requesting selcal check, code LQ-HP (Mark Taylor, NSW). (Can others who listen to aero contribute details on other airlines who use this frequency... Bob)
* **8967 2004z USB** Yokota AFB Japan (USAF) with coded "Skyking" messages, then signed off at 2006z with "Yokota out". (Bob Lopaka, NSW)
* **8975 2302z USB** Hudson 828 aircraft from RAAF wkg Air Force Sydney requesting phone patch to SAS (yes, the SAS!). Required the Programming Officer for East Sale, told to go to 9032 kHz for patch ("Henry", NSW)
* **8975 2347z USB** "Wanderer Bravo" calling Air Force Sydney for radio check. AFS requested distance and bearing from Sydney, given as 600 nautical miles north. AFS then called "Charlie Delta" and was given the response "Charlie Delta, November Mike Sierra". Anyone got clues on this one? (Bob Bell, NSW)
* **9014 1217z CW** Rogaland Radio LFP continuous frequency list for ships at sea (anonymous, Vic)
* **9032 2305z USB** Hudson 828, a HS-748 aircraft, wkg Air Force Sydney with phone patch requested on 8975. SAS Programming Officer not available, spoke instead to Navigation Officer to advise ETA of Hudson 828 and two other aircraft ("Henry", NSW)
* **10213 0754z USB** Bravo Oscar wkg Hotel Uniform, performing full duplex test. It didn't work. "Blue Bell" investigated at Bravo Oscar's QTH to try and resolve the technical problem (Steve Reakes, NSW)
* **10288.9 0813z USB** Papa 72 Echo wkg 77 Foxtrot Whiskey, sounded very "Army" (Steve Reakes, NSW)
* **10505 0213z USB** "Polair 1" (NSW Police JetRanger chopper VH-PHW) wkg Police Airwing at Mascot, letting them know that an aircraft being searched for had not been found in Fitzroy Falls area. Suspected air crash, search possibly going to be aborted. (Bob Bell, NSW)
* **11307 0507z USB** Sydney Radio VIS Radphone channel 1203, young woman calling unknown vessel enquiring how long the seaborne party would be away. Answer to her was "five weeks" (Tony Patrick, Vic)
* **12537 1222z USB** Unknown Asian males in coastal shipping band, sounded very remote from Australian shores, possibly Japanese (Anonymous, Vic)
* **12906.7 0548z CW** Sea Safety Canberra VIX with high seas weather and coastal weather for Gulf of Carpentaria (NT) and Western Australia ("Henry", NSW)
* **13113.2 0430z USB** US Coast Guard station Pacifica, located near San Francisco, with North Pacific weather regarding a ridge at 42N 133W through 55N 145W. A high centred on 42N 167E followed by Washington-Oregon coastal weather from National Weather Service Seattle ("Henry", NSW)
* **13125 2140z USB** Wellington Radio ZLB on phone patch to "Tasmanian Enterprise" from Auckland shipping office. Ship en route to Sydney and crewmember had developed internal bleeding. Ship returning to Auckland, ZLB arranged medivac helicopter to meet ship 100 nautical miles from Auckland. Ship then to proceed to Sydney with company to arrange replacement for return trip. A little bit of high seas drama! ("Henry", NSW)
* **13122.4 0500z USB** Cyprus Radio repeating message "This is Cyprus Radio, Radio Telephone Monitoring Service" stated in English, then repeated in a foreign language either Greek or Turkish ("Constantino", NSW)
* **13181 1750z USB** Barbers Point Naval Air Station, Hawaii. Delta 7 Mike, an American female voice, with coded messages to various stations using callsigns all in the format of letter-number-letter ("Sunset", NSW)
* **13333 1810z USB** London LDOC "Speedbird London" wkg unknown aircraft which requested of the London Engineering Base to arrange maintenance staff to be on standby at Gatwick re: number three engine problems, oil quantity fluctuation and flashing thrust reverser light (Bob Bell, NSW)
* **13549 0525z CW** Station with sea level analysis and signing as Navy 1001, followed by numbers and letter codes. These signs make the same noises as the US NOAA-9 weather satellite on VHF 137.620 MHz (codes, beeps etc). Transmission dogged by constant fading. ("Henry", NSW)
* **13552 2137z USB** Unknown female with American accent transmitting three number and two number groups. "395 82, 964 44, 572 00, 734 04, 627 80", finished with the word END. Anyone got any clues? ("Sunset", NSW)
* **15015 1902z USB** Charleston AFB South Carolina wkg MAC 50217, a C-141 Starlifter who advised Charleston of 19 passengers or "pax", two civilians among them, and four pallets at 10,000 pounds on board. ETA 2235z (Bob Lopaka, NSW)
* **16839.2 0525z CW** Sea Safety Canberra VIX with high seas weather for Australian waters (Anonymous, Qld)
* **17248.2 0605z USB** Wellington Radio NZ with phone-patch to yacht ex-Barrier Reef, re: low pressure weather upcoming and a barbecue in Auckland "next Sunday". Nothing like mixing business and pleasure! (Ron Bromley, NSW)
* **17904 0615z USB** Honolulu Radio wkg Marshall Islands 106 (a leased DC-8) at FL 410 and Continental 103 at 13N 150E (Bell, NSW)
* **17995 1904z USB** Trenton Military Radio, Ontario Canada, wkg aircraft "503" trying to land at Pembroke Ontario, but had encountering bad snowstorm in area. Alternate airfields given as being Trenton or Val-de-Or in Quebec. Ceiling of 300 feet of snow and ice pellets ("Sunset", NSW). Australian pilots have it easy, I reckon - Canadian and US pilots really earn their money in this weather!
* **18002 0540z USB** US Navy aircraft Romeo Bravo 315 wkg Anderson Air Force Base via phone patch; 605th Military Airlift Support Squadron requesting ladder and fuel truck on arrival. Anderson signed off to their Naval cousins with "have a nice AIR FORCE day!" (Anonymous QLD)
* **20185.8 2107z USB** Mission Control Houston advising Space Shuttle "Columbia" that changes of shift would occur at 3.45pm Central Time (USA) and television pictures transmitted from Columbia would be replayed at this time. The replay would last five minutes. Columbia stated all spacecraft systems excluding one computer and one telescope were serviceable. Mention of "Startrack package information from Marshall Spaceflight Centre" to be transmitted "shortly" to Columbia. Signed off at 2113z with "two days, thirteen hours and thirty-one minutes into the flight, this is Mission Control Houston". Once again "Sunset" snares the prize intercept of the issue! ("Sunset", NSW)
* **20185.8 2117z** USB Space Shuttle "Columbia" commenting on alignment of X-ray telescope and resolving situation, said "should lock onto planet at fourteen hours fifty-four minutes". Advised of change of shift at Johnson Space Centre, 5pm central (USA) time. Further discussion of different features of star groups and planets with mention of the "automatic imaging zoom telescope". Lots of technical jargon followed through to until 0100z when reception became poor. Nothing more heard on this frequency over the next three days, even though they were still up there... ("Sunset", NSW)

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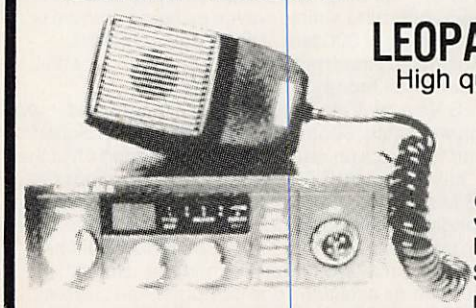

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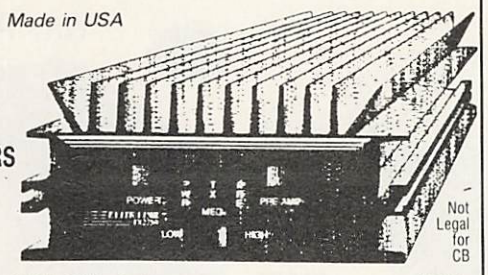

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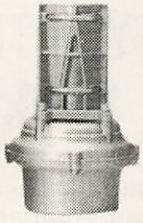

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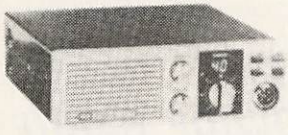

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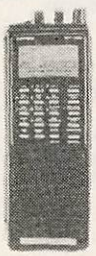

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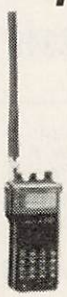

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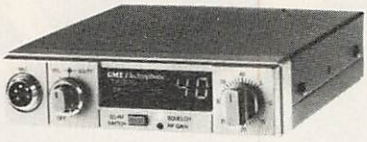

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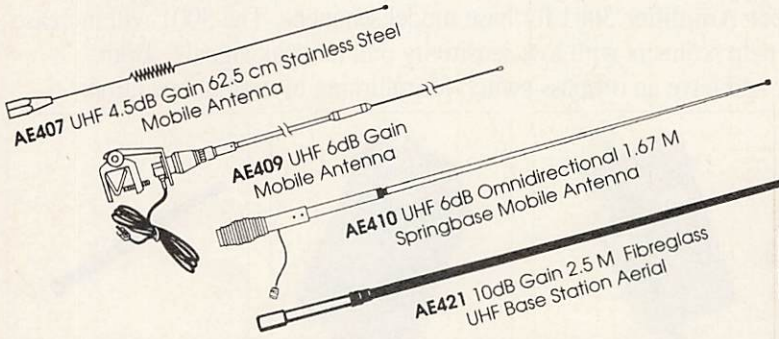
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spectrum anarchy

with Rod Fewster

FURIOUS FEWSTER TELLS IT AS IT IS...

ABOUT BLOODY TIME !

It looks like something is finally being done in Queensland to stop the roadcarnage caused by inattentive and/or speeding truck drivers, and it's about bloody time, too. Queensland Police are stepping up their campaign against truckies who put the pedal to the metal in a big way, radar detector "frisks" are becoming common, headlight flashers are being pinched, and I've been told that any truckie (or car driver, for that matter) caught broadcasting radar trap information on CB will definitely be charged with obstructing police.

WHO'S THE EFFING IDIOT !

Recently I passed a semi which was travelling in the centre lane of a three-lane stretch of Gympie Road, on Brisbane's northside. I was in the right-hand lane, and it was obvious that the semi driver was steering one-handed because as I drove past I could see that he had a carphone handset jammed in his right ear. About 400 metres ahead was a set of traffic lights, and there was a car in the right-hand lane with the bonnet up. I moved into the centre lane, well clear of the semi, then slowed and stopped at the red light. I would have been stopped dead for a good five seconds or more when I heard a frightening screech of brakes.

I looked in the mirror to see the semi bearing down on me with the trailer wheels locked up and the tyres smoking, so bloody close that I was preparing to put the boot in and run the red light to save myself from being rear-ended in a big way. The bullbar finally stopped a matter on a few inches from my boot. The light changed to green and I drove off, counting my blessings.

As I drove off the CB sprang into life and the semi driver started ranting about how "some effing idiot in a Turbo Volvo just cut in front of me and slammed his brakes on at the Murphy Road lights and nearly made me jack-knife the effing trailer. " Before I could grab the mike to call him a liar someone else said something like, "That's bullshit. I saw the whole thing. I was stopped at the lights on the other side of the road. The Volvo was miles in front of you when he stopped. You just weren't watching the road.

I'm a truckie myself, and it's bloody idiots like you who get us all a bad name. You shouldn't be allowed to drive a nail, let alone a semi." At this the guy who'd almost rear-ended me cut loose with a torrent of filth which would have embarrassed a Marine Corps Drill Sergeant, but the other truckie was either out-of-range or couldn't be bothered arguing with the foulmouth.

The trucking industry is trying to make the roads safer by currently running a TV advertising campaign aimed at making motorists aware that trucks and semis need a lot more room to turn and a hell of a lot more distance to stop than the average family car. I reckon a couple of ads telling truck drivers to pay more attention to their driving wouldn't go astray myself.

MIGHT HAVE BEEN SAVED - BUT WEREN'T

A man and his young son died of exposure near the NT/WA border recently after their four-wheel-drive broke down. The two apparently set off on foot with another child to fetch water from a bore about 40km away, leaving two women and more children with the vehicle. (Rescuers found the younger child alive.

He'd buried himself in the sand to protect himself from the sun.) When they didn't return to the stranded vehicle one of the women set off alone and headed for an Aboriginal settlement some fifty-odd kilometers away. She made it, but only just. According to reports she would have lasted less than another hour before collapsing and eventually dying from dehydration. All those who stayed with the broken-down vehicle were severely dehydrated, but still alive, when the rescue party arrived. The only radio in the vehicle was the factory-fitted AM/FM/cassette player. Australia's a beautiful country and there's no doubt that a 4WD is the best way to see much of it, but make no mistake, The Bush WILL kill you if you're stupid and/or careless.

NO WAY IS IT LUCK

"Luck" plays no part in survival. You have to be prepared for any eventuality when you're a hundred miles from the nearest house, and it's got me stuffed why anyone would head off into the desert without some form of communication.

An inexpensive 27MHz SSB rig may have saved all their lives. Strange as it may seem, most of those who die in the outback when their vehicles break down are local residents. I guess they have the old "it will never happen to me" mentality, whereas "city slickers" tend to take more precautions when heading off into unfamiliar territory. A 27MHz SSB rig would have to be the very minimum in radiocommunication gear for anyone planning a trip around Australia. Personally I wouldn't head off into the boonies without an HF-SSB transceiver which is almost guaranteed to put you in touch with someone, somewhere, twenty-four hours a day, from anywhere in the country, but even a CB will give you SOME chance of getting amessage out if you get into trouble.

WEEKEND SAILORS

I spent some time during the last long weekend up at Hervey Bay and had a bit of a listen to the VHF and 27MHz marine traffic. It's surprising how many weekend sailors run into trouble ... everything from snapped propeller shear-pins to outboard motor failure to bailing out and sinking fast to simply running out of fuel and floating off in the general direction of New Zealand.

It's also surprising how many boaties actually have their radios switched on all the time. I heard a number of nearby boats respond to calls for help, and no doubt this took a lot of pressure off the Coast Guard, Air-Sea Rescue, and the local yacht clubs.

MAGIC EPIRBs

Another two lives were saved recently by one of Electrophone's magic little EPIRBs, after two boaties had spent a couple of anxious hours bobbing around Moreton Bay in their lifejackets after their catamaran capsized. Rescue authorities said that without the signal from the EPIRB to home in on it would have been extremely difficult to locate the two men even if they'd managed to transmit a Mayday call (which they hadn't), and added that without the EPIRB the pair would have certainly become statistics in the "missing at sea" register.

HAD A CB RIG NICKED ?

Anyone who has had a CB rig nicked on Brisbane's northside over the past year or so should contact the Petrie Police. They recovered a heap of hot gear including several CB rigs in a recent raid and they're looking for the owners.

YUPPIE GADGETRY

Visitor from Japan showed me the latest in Yuppie gadgets the other day ... a digital watch with an inbuilt alpha-numeric pager. He said there is another version which actually produces synthesized speech, but if you're walking down a Tokyo street it's almost impossible to hear over the traffic noise unless you jam it into your ear. I guess the next step will be a watch with an inbuilt 27MHz CB and 500 Watt linear. Dick Tracy .... eat ya heart out !!

VALE ALEX, GATEWAY BASE

Old Alex, the voice of Brisbane's Gateway Base, didn't survive his stroke.

Jack Haden again looks at "FREEBAND" or should that be....

CLAYTON'S AMATEUR RADIO PROGRAM

or CRAP for short...

As most of us are no doubt aware, much discussion has been taking place, mainly in Europe, with regard to a European-wide SSB service on a legal basis, the majority of European CB services being restricted to FM mode-only operations.

The lure of working DX and DXing via SSB modes of transmission has reached epidemic proportions within Europe and has caught many a government authority by surprise. Initially the problem was confined to the 27MHz portion of the 11 metre band but due to increased congestion there the so called FREEBAND has now well and truly overflowed into 26MHz.

IT'S ALL IN THE "TWO HARD BASKET"

In reality, that is not a bad slice of the radio spectrum, an entire 2MHz in fact, with the majority of operations occupying this space totally unlicensed and of course operating various types of equipment with no restraint whatsoever. It is well know that the problem has become so far out of hand in some countries that authorities have placed the whole problem into the "too hard basket" as their resources have been stretched to the limit.

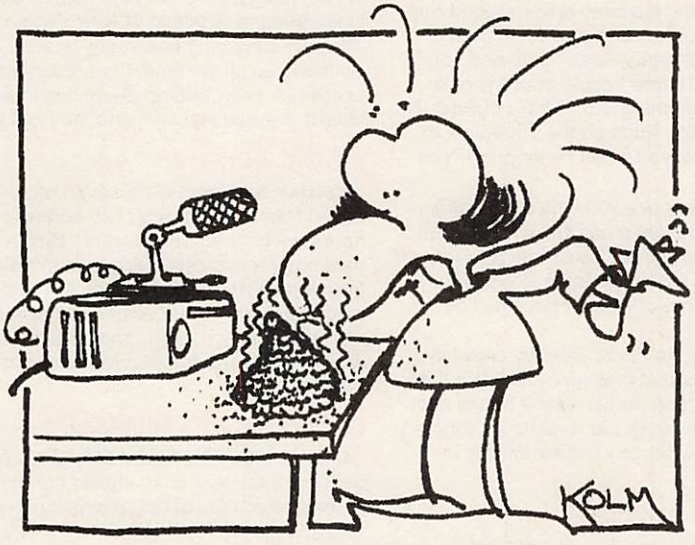
It appears to be quite clear that the main groups advocating a SSB mode so called FREEBAND are within Europe, where the population and support is highest. Aldo, the 1-AT-001, founder and President of the much despised (by authorities) Alfa Tango DX group, is presently making moves to form a committee to lobby the various heads of radio licensing (presumably in Italy) into taking an interest in this silly FREEBAND concept. How he plans to do this and what slice of the 26 or 27MHz spectrum he is after, still remain unclear.

ALFA TANGO TO THE FORE

Mr Aldo is not alone in this pursuit with other groups such as the large Italian based Sperimental Radio Group also making moves in a similar direction. No doubt with the combined "forces" of Alfa Tango and Sugar Radio a large number of DX orientated operators would be represented en masse.

However, I for one, along with many confused Europeans, fail to comprehend what the whole concept is all about. One side of the argument suggests that these lobby groups are fighting for a European-wide SSB CB radio system based on one set of compatible frequencies and nothing more. This sounds sensible to me and would be of enormous benefit to all European CB operators.

The flip side of the argument suggests that these groups are going to pressure for a slice of the 11-metre band and create an enclave of "Claytons" amateur radio operators where SSB will be the ONLY mode of operation and that DX activities and the use of amateur radio transceivers, etc are made legal. What a total load of rubbish! This translates in my book as CRAP, which stands for "Claytons Radio Amateur Programme", in other words, the amateur radio you have when you're not having amateur radio.



TOTALLY INEPT DRONES...

I fail to see the authorities bowing to such pressure in granting a slice of 11 metres to the lazy and totally inept drones that lack the motivation to get off their collective backsides and put some effort into actually studying for an amateur license. By introducing CRAP they would no doubt kill off any type of aspirations that some people have, or would have had, in pursuing an amateur license. Any such idea of CRAP should be stomped on heavily...

It must be acknowledged that many 11-metre pirates, HFers, or FREEBANDERS - call them what you will - have contributed to the ranks of amateur radio by way of actually working hard to get their licenses and thus moving onto amateur radio and the greener pastures it has to offer. The CB boom of the seventies right up to the present day has helped boost the numbers of radio amateurs, but then again in those days it was a matter of survive or perish, if you didn't get the license then you perished by way of that feared knock on the door.

IT'S JUST "PLAY WIRELESS"

By making CRAP a reality we in turn create a world of "Play Wireless" where laziness would no doubt set in and of course present little if any aspiration for those who are a part of CRAP to venture on into amateur radio. Some of these lobby groups have advocated the requirement of a basic exam dealing with five words per minute morse code and basic operating procedures for basic "membership" in CRAP. In my view, if you can do the morse then what is stopping you from doing the rest of the novice license?

Basically Europe does need a standardised Citizens Radio network with the added bonus of SSB being part of the plan, but neither the world nor Europe needs a bunch of idealists or other such crackpots lobbying for a form of "Claytons" amateur radio or a "Play Wireless" enclave because their tiny minds lack the stamina to study for the proper license. If they had the capacity to study and pass the basic novice exam they would have done so by now and would not be entertaining CRAP or other such ridiculous notions. Personally I cannot see the authorities spending money on establishing CRAP

when there is a Novice license which already covers part of the argument. A few weeks back I received a publication from Europe with some quite concerned letters to the editor amongst the pages concerning what I have just documented, thus CBA is reprinting them to convey to you the confusion that exists in Europe over SSB and FREEBAND.

AND THE LETTERS...

Letter number one, and subsequently the replies concerning it:

Dear Sir,

While reading the report of the world meeting in Asti '90 we were very concerned by item No. 15 "lobbying for 11 metres". Legalising SSB on 11 metres will encourage thousands of "good buddy CB operators" to use SSB also causing even more QRM and more TVI giving us all a bad name. While we recognise CB is included in 11 metres and cannot be excluded from our radio group (Alfa Tango), we also recognise that many CB men already have SSB radio and are just waiting for legalisation, some of these people are the scum of the radio spectrum.

If the United Kingdom Division starts fighting for legalised SSB and joining the good buddy brigade, then we will fight against it. Our organisation could well do without a split within its ranks just when we are entering a new decade of improvements in our group (Alfa Tango) thanks to much hard work by our management team. May I ask you to think and think again about the consequences of a legalised system.

While many countries will benefit from a legal band, I cannot see our government giving us 26.000 - 27000Mhz without massive concessions on our part, I am also sure legal amateurs will fight against us.

Let's stay an underground operation. If we creep out of the woodwork now, watch out for DTI (Radio Inspectors) and CB to stab us in the back. DON'T LET THIS HAPPEN PLEASE, signed: 26-AT-429, 979, 191 & 103.

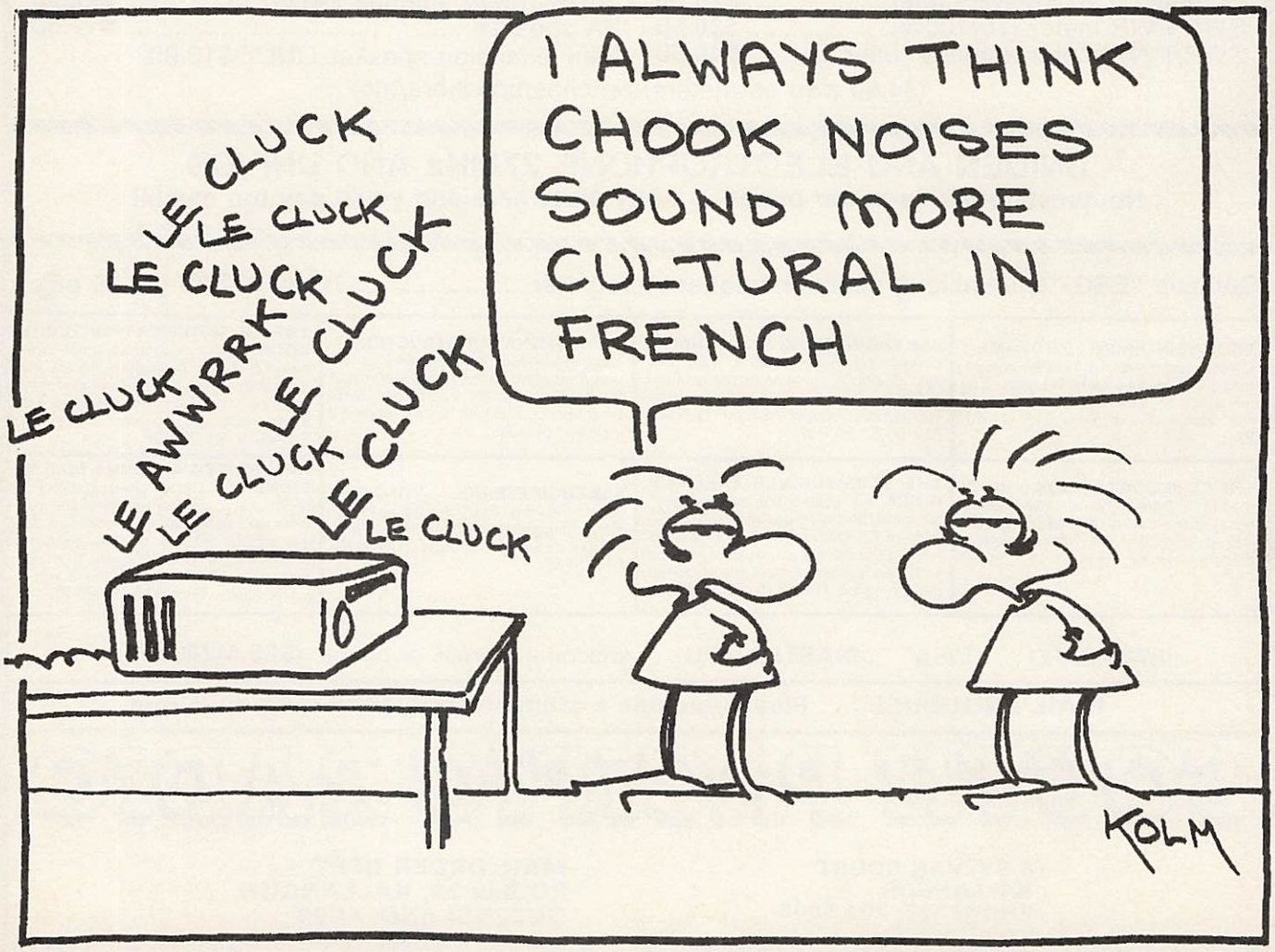
Now this letter started a string of replies, some for and some middle of the road and judging from the content, they too are a little confused as to what is being lobbied for, read on:

Dear Editor,

This is a reply to the letter in the last 11 NEWS. I think that the members in Warwickshire have a misunderstanding regarding getting the 11 metre band legalised. Firstly France and Italy have made much progress towards this goal and Germany and Spain are trying very hard.

As we all know, in 1992 Europe will become one market and whether the politicians like it or not, one currency will follow by about 1994, and by 1996/7 it will become the United States of Europe and we must think forward to what is going to take place over the next 10 years. If the other states in Europe become legal, it is obvious that we will have to follow suit, so what is being said at the present time, is that the authorities must be informed as to what we feel, so we don't get left out when things do change.

We do not expect a free for all as all negotiations in Europe have been around the idea of a small test, mainly on operating procedures and interference - this will have to be controlled by one of the major clubs and I can only see that one has the management set up to undertake this. It's quite possible that we could have to learn ***(continued over...)***



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morse code with a sending speed of five words per minute because in an international agreement worldwide you cannot use HF bands without knowledge of morse code. We could negotiate for a license similar to the present Novice Licence being introduced on the ham bands (U.K.). This would give us access to professional equipment, good antennas, etc and would tidy up the whole operation on 11 metres which, let's be honest, at times is a rat race.

By having some rules and regulations, we would have no fear of the ordinary FM CB operator taking the trouble to come onto the bands with us, unless he was really interested in that side of radio. Let's be perfectly honest, the ordinary CB operator is lazy, cannot be bothered to learn the codes and wouldn't be bothered to take the test. All he really wants to do is talk to one of his mates down the road or chat up a girl. We are not suggesting interfering with their part of the band or stopping their part of the hobby. Regarding the amateur side, I can assure you that they have no interest in the 11 metre band, as you know I am an 'A' Class amateur and compared with conditions on 14 and 21MHz 11 metres has nothing to offer these people, except perhaps a more friendly QSO. Anyway I shouldn't get too worried about it as it will all take a very long time to get any discussion going as we haven't even set up a committee yet. Hoping this has cleared up some points. 26-AT-560 in Essex U.K.

Dear Editor,

I would like to take this opportunity to reply to the article in the January edition of 11 NEWS from Tim, 26-AT-29 and his friends regarding their comments about the "lobby for 11 metres".

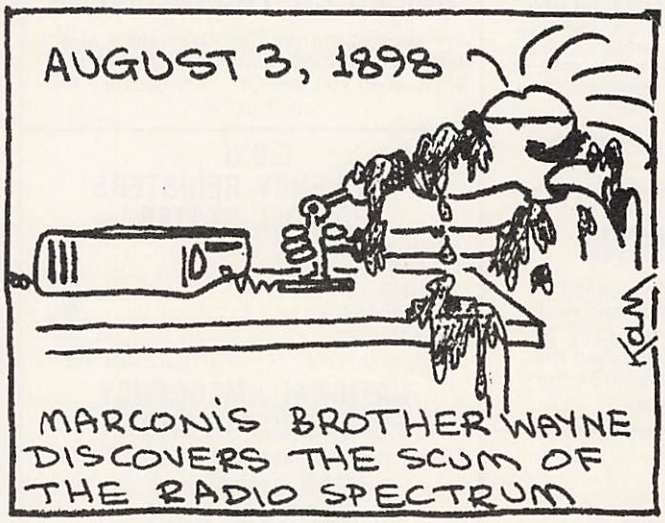
First of all I must tell you that I do not use FM at all but having said that, I think to use words like, and I quote, "the scum of the radio spectrum" is a bit over the top.

My first introduction to radio was via FM, as is the case with most SSB operators. Now I agree there are some "nutcases" on FM, but my motto is; "For every bad one, there is a good one", just as on SSB.

A period spent on FM can help prepare a person for SSB, I know I get much pleasure introducing someone to the wonderful world of SSB and DXing. In my city most people usually start off on FM, then often join a local SSB group, where they will receive help and guidance and usually become good operators and end up joining the Alfa Tango group.

But then maybe Tim and his friends were born with SSB sets fitted in their prams, with mobile antennas on board and were members of the Alfa Tango group all of their lives.

Come on Tim and Co., share the pleasure you get from DXing with someone who may have had enough of FM. I for one hope the day will soon come when we don't have to operate with one hand on the microphone button and the other on the curtain. Roy, 68-AT-127.



Dear Members,

As most of you will know, Aldo 1-AT-001 add the committee in Asti are trying to start a campaign for a legalised SSB CB system in Europe. It has happened in some countries where they have had a legal sideband system for some years now albeit there are only a few channels involved.

But the main problem would come from the Home Office. As you know, there is a new Novice license in operation for the ham bands which will allow operators the use of a small section of a couple of bands that are already in use by radio hams. The modes for use with the Novice licence would be CW and operators would only be allowed the use of the designated bands after taking a small exam.

The Americans seem to be able to cope with an AM and SSB CB system, but as we all know, over here there is far too much RED TAPE to wade through before they even give a thought to legal SSB system for the U.K. Perhaps this could be one bit of good that comes out of belonging to the Common Market, after all some countries in Europe have a legal SSB system. Ken, 26-AT-212.

Dear Editor,

Reading through the letters in the 11 NEWS a few things came to mind one of which is in Tim's letter as regard the legalisation of SSB. In the days of AM, before CB 27-81, the 27MHz band worked well, most people on CB were helpful. Then CB radio was in its infancy where to get a radio was a bit of cloak and dagger, ask around, get a contact, buy a rig and a twig and there you were, "a 10-4 good buddy back to you breaker, break." I suppose most of the people who went to SSB wanted a bit more out of radio than "eyeball eyeball, what's your 20, what's your handle and 10-10 till we do it again".

Anyway Leicester became known as Turkey Town due to the retards thinking "Oh! How clever I am blocking channel 19, using Channel 9, playing music", etc. Think of it and you would hear it in Leicester first.

When FM came in it got worse because now anyone who wanted a radio could buy one. It didn't make much of difference to me. I had got interested in getting over the Pond, AM and FM were just on the switch, USB and LSB were the ones that mattered. If SSB became legal it could be the start of the end on 11m band. The only thing could be that people wanting to go on to SSB should have to take a Novice exam or be a holder of the RAE. Anyway, food for thought. Barry, 26-AT-865.

Well, that's the last of the letters I have reproduced for you from the U.K. edition of 11 NEWS. It seems that they are just as confused as we are on what these so called "Lobby Groups" are going to push forward with regard to a legal SSB system in Europe.

Rumblings have already started within the amateur radio community about the increase in pirate activity on the bottom portion of the 10 metre band and the ease of purchase and subsequent modification of radios such as the Uniden HR-2510 and the Tandy HTX-100. On air recently I heard a conversation between two amateurs suggesting that Uniden brought out the HR-2510 with the 11 metre FREEBAND in mind as 10 metres is already adequately covered in the majority of HF transceivers both past and present.

Part of the blame is simply the failure of the government to enforce a law which requires the purchaser of any transmitting equipment to present a valid license prior to the sale.

I support the concept, but I do not support the idea of entertaining the idea of CRAP (Claytons Radio Amateur Programme).Perhaps when sunspot Cycle-22 gradually fades away so too will the notions of CRAP and "Play Wireless", only to resurface again when the next cycle comes along in 11 years time?

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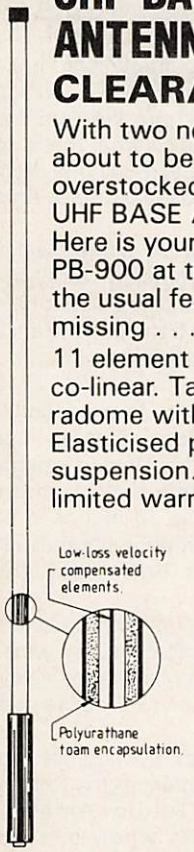

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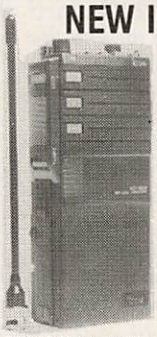

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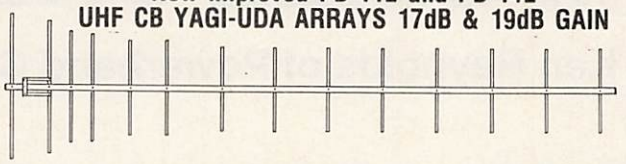

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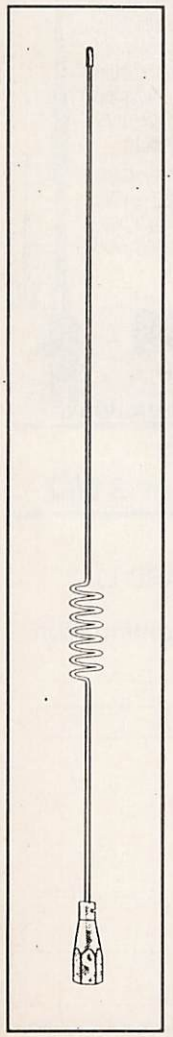
MORE ANTENNAS FROM MOBILE ONE

Reviewed by Ken Reynolds of Powerband Communications

In our May/June issue we had a look at several of MO's best selling antennas, however, the company makes so many, we're reviewing a few more in this issue - including the big COL6(M) UHF unit.

STAINLESS STEEL UHF 4DB WHIP

There is a whole collection of gain type, ground plane dependent antennas on the market. They range from virtual rubbish in terms of manufacture and often performance to sleek, high quality componentry units with performance ratings spread all over the place. For example, some "X"dB gain units are in many cases just copies of copies that were made from terrible copies in the first place.



Simple in construction, this stainless steel antenna works well and at $19.95 certainly isn't expensive.

Having set the scene, let us introduce a 4dB ground dependent whip with, pardon the pun, a bit of a "twist". Mobile One is marketing a stainless steel wire version of this popular style antenna.

There is not a great deal to be said about this type of antenna in terms of review because of the simplicity of the unit's construction.

The whip top employs the standard tried and proven lengths for the radiators with the phasing coil all rolled-up from a single strand of quite strong stainless steel wire securely crimped into a standard 5/16 inch mounting ferrule.

We found the performance as good as any of the better fibreglass whips and the construction more suitable than 'glass - if you tend to forget your low hanging garage door and even worse, city centre car parks where the overhead space is often very tight. In these circumstances plastic covered whips tend to get severely damaged and are frequently rendered useless quite quickly.

In our last issue we looked at a few antennas from Mobile One Australia, however, the company offers such an extensive range of CB antennas that we decided to examine three more of their products this month.

The Mobile One stainless steel whip suffered a few abrasions from the concrete over hang of our "test garage" but emerged largely unscathed. We should point out, however, that the antenna ended up at an embarrassing angle after its encounter. A quick operation with a heavy pair of pliers and then, even better a hammer, soon put it almost right. It's not an easy job to straighten a piece of stainless steel wire without the right equipment.

THE COL6(M) ANTENNA

The COL6(m) looks more like a mini base station antenna than a mobile stick - sort of a shrunken 6dB base station antenna - with the addition of a heavy gauge aluminium mounting sleeve and coil spring "suspension" that offers great strength and mounting durability. The bottom of the spring is drilled and tapped to suit a supplied 1/2 inch Whitworth (23mm) "hex" bolt that is more than adequate to firmly mount the whole assembly to the bull-bar of a four wheel drive or truck.

I should mention at this point that the COL6(M) is not your regular mobile UHF antenna suitable for the family set of wheels as there would be hardly a sedan around that could provide a sufficiently strong mounting surface for the antenna - without some extensive metalwork. Still, a real enthusiast looking for the ultimate in mobile performance would probably find a way.

The radome is actually separate from the mounting hardware and could be used as a "stand-alone" antenna if required, however, as a heavy duty mobile antenna offering 6dB gain it is held firmly into the mounting sleeve by two stainless steel Allen screws. An Allen wrench is supplied. Cable entry to the antenna base connector is via a cross-drilled hole in the mounting sleeve which is a bit clumsy to say the least, however, it is difficult to come up with another solution to the problem without dramatically increasing the manufacturing costs and therefore the final retail price.

Performance of the antenna is excellent and compared with the smaller 6dB mobile whips it offers a definite advantage, mainly due to its superior "capture area" as in sheer physical size it towers over the other ground independent arrays.

The white, fibreglass antenna radome is quite rigid and, combined with a suitable strength spring, the whole antenna assembly remains largely erect at high speed when mobile thus producing the correct attitude for best vertical polarised performance - which is of course the main object of the design. A "softer" spring would allow the antenna to "wave" around when mobile producing unnecessary signal fade and increased the level of flutter.

The spring, however, is still sufficiently flexible to permit the antenna's passage under quite low obstacles without suffering any real physical damage - provided of course you don't carry out the "clearance" test at high speed. Because of the relatively high mass of the antenna it will develop a high moment of inertia at speed and if you collect a low hanging tree

or bridge....something's gotta-give and given Murphy's Law it will be the antenna. This antenna has been around for quite some time and about three years ago we supplied one to a retired Victorian "Copper" named Kelly who did a six month stint travelling into some of the most severe dessert conditions you would expect to find anywhere. His antenna was bull-bar mounted for the trip and he also carried a smaller 6dB whip mounted on a magnetic base as a back-up antenna. He conducted frequent comparisons between the two antennas and at the completion of his trip he reported that the longer antenna offered by far the best performance in just about every situation and in many instances the difference was in making or missing a contact.

The Mobile One COL6 (M) is not quite as glamorous looking as a similar antenna from another manufacturer but the engineering is probably just as good with the advantage of a lower price tag being a good recommendation.,

ANOTHER 27MHZ SKIPWHIP.

Yet another "Skip Whip" has been recently added to the 27MHz Mobile One Australia range of antennas. Similar in most respects to the SAM base unit checked last issue, this third model has some interesting variations that we reckon Greg should have brought out a bit earlier.

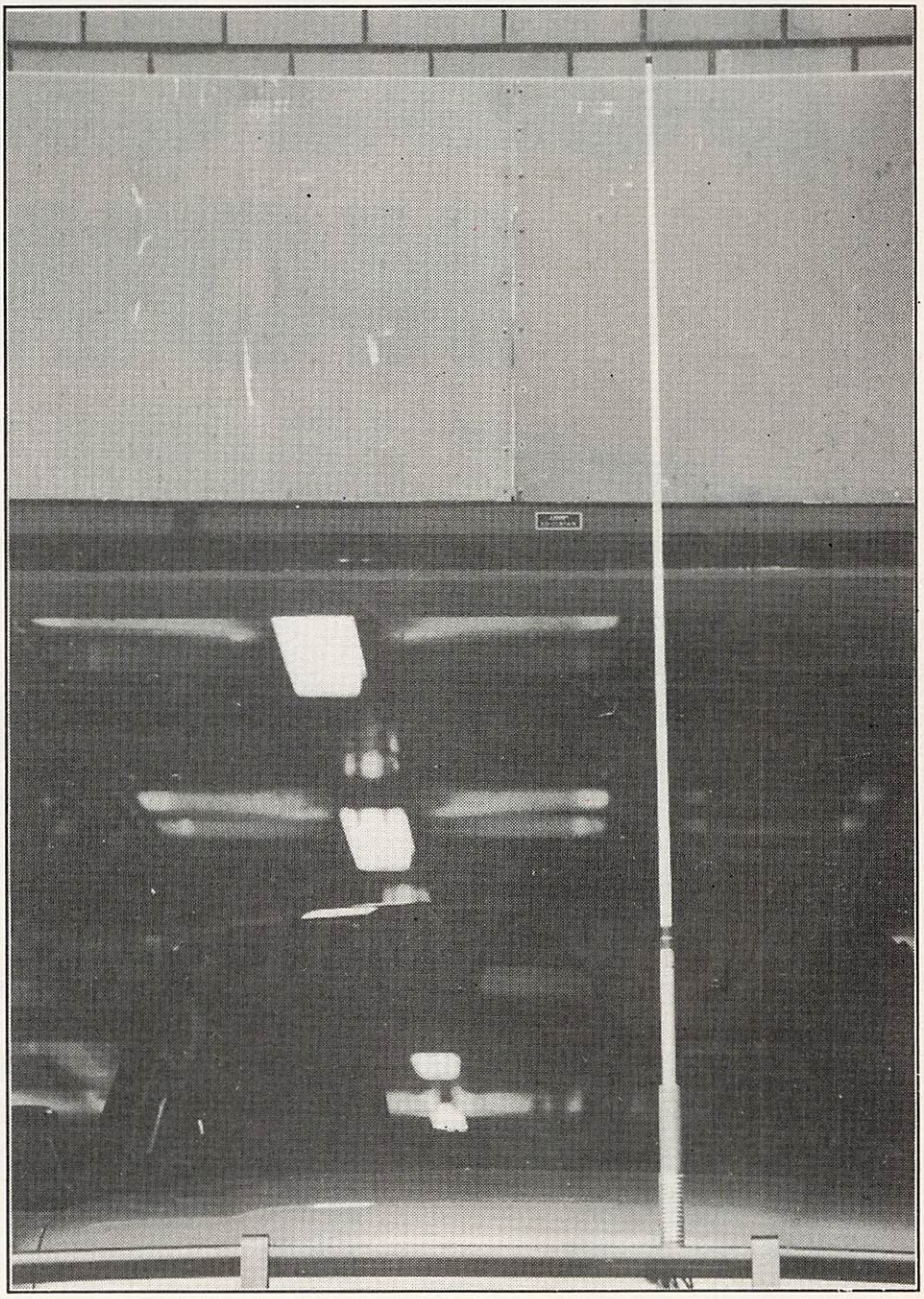
The original Skip Whip is a six foot (1.85m) long constant pitch helical mobile whip with a fairly heavy, solid fibreglass core. It is covered with a relatively lightweight PVC heat shrinkable plastic and sports a heavy mounting ferrule, drilled and tapped for the Australian standard 5/16 inch 26TPI mounting base. While the economy model continues in production, we have always thought the 5/16 mount was a bit light for such a big, heavy antenna, however, time has proven that the survival rate of the model has been pretty high - under light stress conditions.

This latest model employs the tougher, longer life polyolephin sheath which is far superior to the lighter coating and the mounting ferrule has been beefed up to take the heavy duty 1/2 inch mounting thread traditionally used with the commercial grade HF mobile whips e.g. Royal Flying Doctor Service, Radphone etc.. Mobile One markets their own heavy duty mounting base to suit the antenna, however, if you happen to already own one of the various heavy duty bases from another manufacturer this model Skip Whip will most likely just screw straight on.

The mounting ferrule has been cross-drilled and fitted with a small Allen screw so that after attaching the antenna to the base the screw can be tightened to "lock" the whip securely in place.

A small Allen key is taped to the whip at purchase. Performance and power handling of this latest model Skip Whip is excellent and it saves the added cost of the stainless steel spring - especially if you need a strongly mounted antenna and you don't intend collide with a lot of low hanging obstacles.

If at some stage you do decide to become a weekend "greenie" checking out the Australian bush for others damaging the foliage with unsprung Skip Whips you can always buy one of a variety of medium to heavy duty springs to fit the half inch standard antenna mounts.



The COL6(M) is not the sort of antenna for around town. It fails to fit under the local garage roof by about 50cm, but, it's just gotta work brilliantly outback or even as a base/mobile antenna.

A WORD OF CAUTION

Just a word of caution when buying springs for any antenna. People frequently underestimate the strength of the spring required for a given size whip. Before you part with your cash, see if the vendor will let you try the spring on your mount first to be sure it suits your antenna size and weight.

The review antennas were supplied by Dick Smith Electronics.

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Get Your Head In The Clouds

Sky-High DX!

Rob Williams says there's a whole world of excitement on the HF aerobands.

Tuning into the utility traffic of the HF aircraft bands is easy and enjoyable. You just need to know when to tune, where to tune and what those codes mean... and this article gives it all to you. Remember, frequencies are all in kHz unless stated otherwise and like all true DXers we will be speaking in UTC, which is the same as GMT. Pilots too speak in UTC, so now is the time to get used to working in 'universal time' and converting between 'zulu' and your local zone.

Most of us have travelled in a plane of some type during our lifetime, sitting there watching the world go by and being amazed by the sheer wonder of flight. But without modern communications, each flight would be riddled with danger. From the low end of HF through to satellites thousands of kilometres above Earth, aircraft use radio to keep in contact within Australia and around the globe.

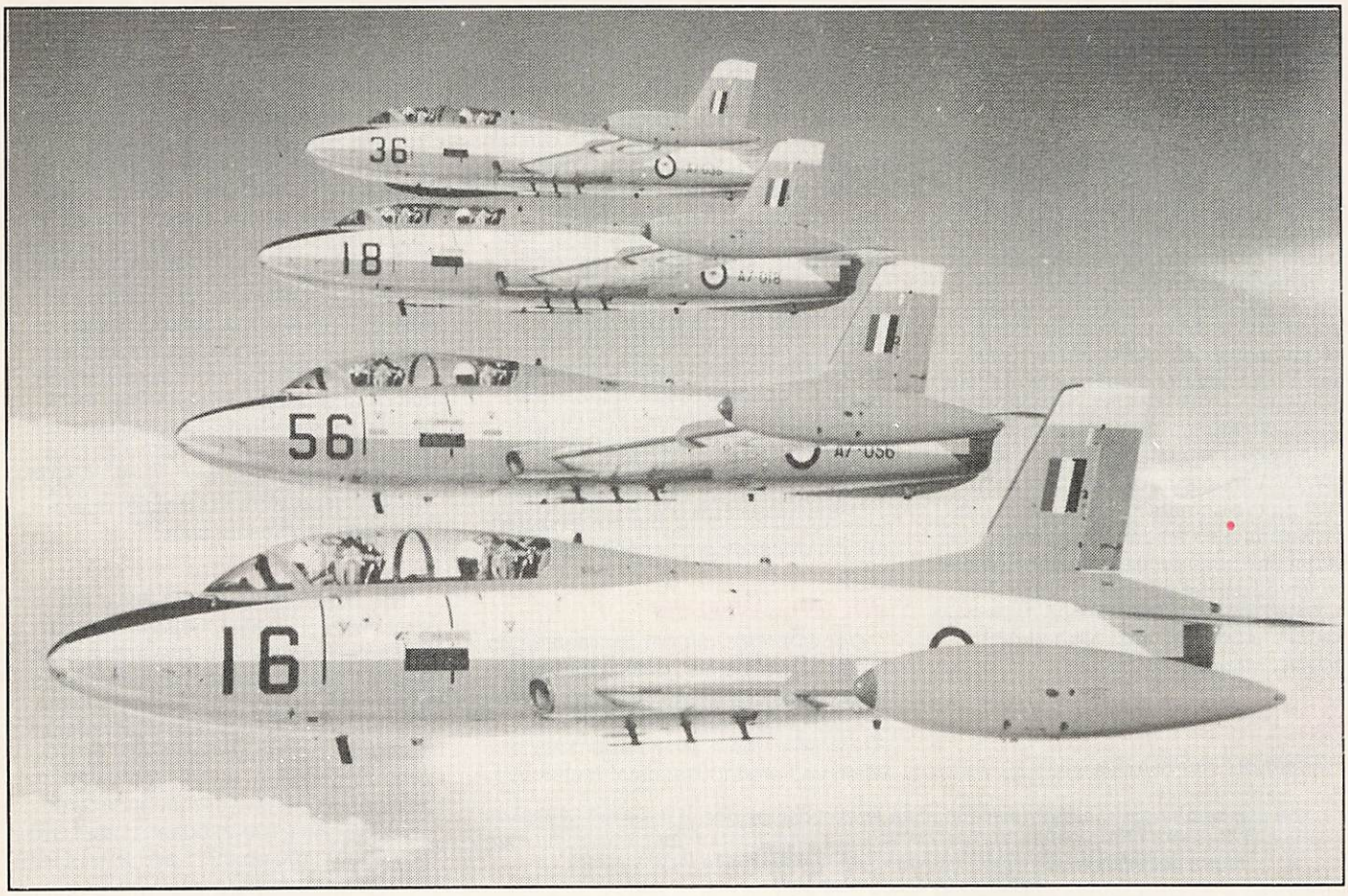
VHF communications and satellite links to link pilots with Air Traffic Controllers (ATCs) at their nearest airport. But what happens as you fly over Australia's vast uninhabited regions, or the seas and oceans between continents? This is where high frequency communications comes into play. This article will give you the power to fly around the world, any time you choose, with the pilots and cockpit crew - without buying a ticket!

RAAF Caribour (callsign "Enfield") photographed flying low over snowfields. Given time, a few hints as in this article, and a little hard work, you can listen to the activity on your scanner.

Where To Listen

Let's start with some background knowledge so you have a picture of how everything comes together. All aero communications is carried out in SSB, on the upper sideband. So like most utility monitors you will need a receiver with SSB tuning facilities to join the airband action. Until 'clarified' sideband transmission sounds like garbled 'Donald Duck' language, but with patience and a steady hand you can resolve the signal into clear English. As most radios warm up they may drift slightly off frequency, in which case you'll need to fine tune from time to time to remain on frequency.

The high frequency spectrum includes a number of bands set aside for the exclusive use of aeradio: 2850-3155, 3400-3500, 4650-4750, 5480-5730, 6525-6765, 8815-9040, 10005-10100,



11175-11400, 13200-13360, 15010-15100, 17900-18030, 21870-22000 and 23200-23350 kHz.

It also helps to understand the concept of 'airspace' and how the seemingly enormous and endless sky is divided and shared between aircraft. 'Controlled' and 'uncontrolled' airspace are two terms you will often hear on the airbands. The first zone is one supervised by an ATC who sits in front of a radar screen directing the air traffic; in uncontrolled airspace, a Flight Service Officer co-ordinates aircraft without radar facilities. Although pilots choose their own flight levels they are requested through the FSO whose job it is to ensure there are no conflicts or danger.

There are also divisions made around the world, to reflect domestic and international air routes. The first is known as the Regional and Domestic Air Route Area, diving countries and their surrounding waters for domestic travel. Australia has seven such zones, with another 70 worldwide. On the RDARA channels you will hear everything from small aircraft to passenger jets travelling between cities, although as VHF and satcomms expand there will be less HF traffic along these routes. This has already happened in the European domestic area, and with the advent of more powerful satellites aircraft are being fitted with satellite antennas enabling them to communicate directly with anyone in the world without having to use HF. Not only will the pilot and crew be able to communicate with the company office but important technical data concerning to performance of the plane can be sent automatically.

If you're visiting an airshow the chances are good that you can program your scanner to listen to both aircraft and ground control as they go through their paces.

Where to start listening

To start your aeradio DXing, try the following area frequencies:

North-East (north of Thursday Island, west to Mt Isa and south to Moranbah) - 3452, 6616, 8891.

Central-Eastern (west from Longreach to Rockhampton, down to Casino) - 3452, 6610, 8831.

South-Eastern (west to Bourke, east to Coffs Harbour and south to Hobart) - 2944, 4678, 5526, 8876.

South-Central (includes Broken Hill, Adelaide and north to Alice Springs) - 3461, 4693, 6580, 8858.

South-Western (by far the biggest zone, stretching north from Albany to Learmouth, east to Forrest and to the coast beyond Perth) - 3461, 4684, 6565, 8822.

North-Western (north of Learmonth to Darwin, east to Cattle Creek) - 3461, 6604, 8900.

North-Central (Alice Springs to Darwin and above) - 3452, 6541, 8843.

Remember that the higher frequencies are used during daylight hours, and lower frequencies at night.

Like cars on our roadways, international aircraft tend to travel along invisible routes between countries. These courses represent the quickest and most practical path between two points. The shortest route may not always be used, as aircraft must have permission to fly over each country on their route. When wars flare up you will find aircraft diverting around these troubled zones. As an example, during the Gulf War the airlines needed to divert around the entire Gulf region to avoid any chance of being caught in the fighting.

International flights between countries can be heard on a series of frequencies allocated to the Major World Air Route Area. There are 15 such areas, three of which cover Australia. The South Pacific region is known as SP-6 and covers major airports at Sydney, Auckland and

(continued over page...)

Sky High DX

(continued from page..)

Nadi, with frequencies of 3467, 5643, 8867, 13300 and 17904; SEA-3 includes a large part of Australia's west extending from Darwin to Perth, out to Singapore and the Cocos Islands, and is heard on 3470, 6556, 11396, 13318 and 17907; while aircraft movements from Perth to Africa fall within INO-1, which uses 3476, 5634, 8879, 13306 and 17961. By the overlapping of these areas an aircraft is able to maintain constant HF communications world-wide.

Whenever aircraft cross into any MWARA zone the ATC will inform the pilot on the primary HF channel in use as well as a secondary frequency in the event that communications can't be established on the primary channel. You will also hear ground stations answering aircraft calls when the called airport doesn't respond.

Many Major Zones To Listen For...

There are many more major zones which you may care to listen out for.

CEP-5 covers the area between Honolulu and San Fransisco, and uses 2869, 3413, 5547, 5574, 8843, 11282, 13300, and 17904; NA-A extends from New York across to Lisbon and can be heard on 3016, 5598, 8825, 13306 and 17946. In the NA-B/C sector you will copy traffic from the east coast of Canada to Shanwick in Island on 2899, 2962, 5616, 5649, 8864, 8879, 13291, 13306 and 17946. NP 3/4 covers Anchorage, Alaska on 2932, 5628, 10048, 13300 and 17904; CWP 1/2 from Tokyo to Port Moresby thence to Honolulu on 2998, 4666, 5652, 6562, 8903, 11384, 13300 and 17904; and finally, E-Car is for the East Caribbean area on 2887, 5550, 6577, 8918, 11387, 13297 and 17907. These frequencies may not all be active, but are allocated for use depending on conditions at the time.

What You Will Hear

Once inflight, aircraft are required to report at 'waypoints', designated locations which along with sensitive navigation aids help pilots keep on track. Remember, there are no street signs when you are thousands of feet above ground! Communications between ATC and aircraft employ a selective calling or 'selcall' tone, which is a unique number possessed by that plane. For the ATC it's just like dialling a telephone number. You will hear pilots responding to waypoint calls with such information as the amount of fuel left on board, outside temperature, aircraft height, speed and other details as relevant. When an overdue plane fails to report in, all aircraft in the area are asked to monitor the HF distress frequencies of 3023.5 and 5680. Other channels which can be used are 8364 (the international emergency and shipping frequency), 4125 and 6215.5 for Australian coastal shipping, 2182 for international small ship distress calling and 5695 for the RAAF. An SAR (Search And Rescue) operation may also be launched.

RAAF Frequencies

The RAAF fly many missions, not only between military airports around Australia but overseas on various tasks and military exercises. When overseas they report on the airbands as with the callsign "Aussie" followed by a number for the aircraft. RAAF channels to tune to include: Darwin 0900-2100 on 3032, 2100-0900 on 8975; Perth 0900-2100 on 5688 and 2100-0900 on 11235; Sydney 0900-2100 on 8975 and 2100-0900 on 13205; Townsville 0900-2100 on

You can catch a lot of airborne action at an airport on any day of the week. Airscan fans can always be found there during the weekend and most of them will be only too happy to help you tune into the action of overseas' and local aircraft.
PHOTO: Courtesy Bob Bell

Captain of East-West F28 VH-EWA checks paperwork before flight from Sydney to Tasmania.

PHOTO: Bob Bell

5695, 2100-0900 on 5695 (distress only). Many other channels are used when a phone patch is requested between an aircraft and a ground station.

In-flight Phones

Skycom is a system run by OTC, and allows pilots to originate or receive telephone calls via HF radio. The service can be activated in two ways, by direct voice communications or by a specially fitted dual-tone multi-frequency (DTMF) microphone. Either of these measures will raise an OTC operator who then places the telephone patch between the HF aeradio and the phone system. Both voice and autocall requests are heard on 5160, 8140 and 11132, with autocall only on 9040, 17440, 20160 and 23070. Note that monitoring actual aeradio-landline phone calls is just like listening to mobile or cordless phones on your scanner, it is not allowed under Australian law. An extension of this service is Skygrams, which are messages sent or received by telex, telegram, telephone or fax anywhere in the world. Skycom was extensively used when Qantas took delivery of their first long range 747 Jumbo on its maiden flight to Australia.

Qantas Channels

Large international airlines need to keep in contact with their entire fleet, no matter where they are in the world. At present the only way to do so is to use HF. Qantas use 6637 and 10078 for most traffic; other frequencies assigned to them are 3007, 4687, 13342, 17922, 17949 and 21970.

Weather Info on Volmet

Aviation weather reports are available around the clock on HF by the use of Volmet stations. Once again there are 11 world regions each with separate frequencies. Some of the common ones are CWP/CEP/SP/NP (this includes Honolulu, San Fransisco, Tokyo, Hong Kong, Auckland and Anchorage) on 2863, 6679, 8828 and 13282; SEA (Sydney, Calcutta, Bangkok, Karachi, Singapore and Bombay) on 2965, 6676 and 11387; and NAT (New York and Gander) on 2905, 5592, 8870 and 13270. Volmet station broadcasts last five minutes each half hour and start in the order I've listed the stations above on the hour.

International Military Traffic

The US Air Force are big users of the shortwave bands, and many previously unknown frequencies were reported during the Gulf crisis. 11176 seems to be the most active, with signals coming from several bases around the world. Traffic has also been logged on 11204, 23946.3, 11234, 15015 and 11006, while 13214 and 6738 have been reported as being used by the US military in Turkey. Aeradio expert Bob Bell tells me of two he has personally been monitoring, 13826 and 13828 between 2000 and 2100. Andrews Air Force Base uses 8967, 6738 and 4621, while Wickham AFB can be found on 4729, 6738, 8964, 13201 and 18002. In January, at the height of the Gulf conflict, President Bush signed an order placing over 180 commercial aircraft into military hands. The Civil Reserve Air Fleet includes companies such as United and Continental, and was used to ferry troops and supplies to the middle east. CRAF planes use callsigns beginning with MAC (for 'military aircraft') followed by numbers. The US war machine is such a large organisation that they can use any of the several hundreds of frequencies at their disposal, making it hard to keep track of all of them.

Also logged on HF have been Airforce One and Two, the callsigns belonging to any aircraft on which the US President and Vice-President are travelling. Like the USAF these aircraft can and do turn up on any frequency they choose, and my list of frequencies on which AF1 and AF2 have been reported is far too long to print here!

Where To From Here ?

If this brief guide to the airbands has whetted your appetite then you'll want more, and I can recommend no better book than "The Australian Airband Guide". Written by Bob Bell, aeradio expert and CBA's own ute editor,The guide is available for $24.95 plus $3 p&p from PO Box 301, Chester Hill, NSW 2162.

For now you've got plenty of background information and a collection of frequencies that are easy to hear and will carry enough traffic to get you started.

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- ★ Channel memory
- ★ Rugged construction

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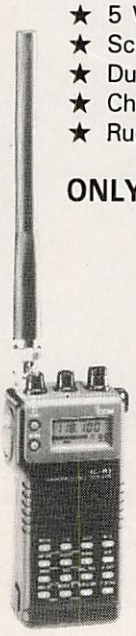

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Cobra 146GTL CB SSB/AM 40CH **$262**

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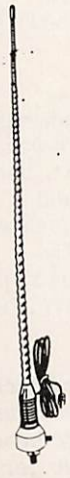

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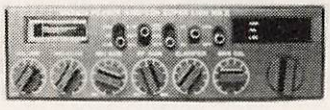

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- ★ CUB 40 Ch AM **$79**
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NOTE: Skip conditions are virtually the same from Sydney as they are for all other East Coast areas — likewise Perth predictions can be taken as similar to those for other West Coast areas.

DATE JULY 1991 — ADDRESS NO. 8303

SYDNEY-JAPAN 7825
27.0 .%%FMMMMF%..... ....
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-MIDDLE EAST 12903
27.0 .%%%%%.
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-CENTRAL EUROPE 16090
27.0 .....
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-SOUTH AFRICA 11036
27.0 .MM%.
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-C&E.COAST USA 15712
27.0 ... .
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-WEST COAST USA 11951
27.0 %.%MF. .. ...%%
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-WEST INDIES 14950
27.0 %%%..... FFF%
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-SOUTH AMERICA 13180
27.0 %%%%.. %F%
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-NORTH AFRICA 17109
27.0 .....
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-PAPUA NEW GUINEA 2740
27.0 FFF%%%%%. FFF
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-ENGLAND SR 16993
27.0 ..
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-WEST AFRICA SR 16428
27.0 %%. .. .%
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-ENGLAND LR 23031
27.0 ..
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-WEST AFRICA LR 23596
27.0 .. %.
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-JAPAN 7923
27.0 ...FMMMMMMF%.... ..
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-MIDDLE EAST 10077
27.0 .%%%%%MMM%.
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-CENTRAL EUROPE 13575
27.0 ....
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-SOUTH AFRICA 8315
27.0 .FMMM%.
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-C&E.COAST USA 18614
27.0
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-WEST COAST USA 14743
27.0 ....
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-WEST INDIES 18005
27.0 %%%%%... %
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-SOUTH AMERICA 14569
27.0 %%.
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-NORTH AFRICA 13941
27.0 .....%
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-PAPUA NEW GUINEA 4073
27.0 .%%%..... .
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-NEW ZEALAND 5255
27.0 %FFFF%% %
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-ENGLAND SR 14480
27.0 .....
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-WEST AFRICA SR 13804
27.0 .. %FFF.
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-ENGLAND LR 25544
27.0 .
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-WEST AFRICA LR 26220
27.0 .%
MHZ ! ! ! ! !
00 06 12 18 24

MELBOURNE-P.N.G. 3157
27.0 FFFFFFF%. FFF
MHZ ! ! ! ! !
00 06 12 18 24

BRISBANE-P.N.G. 2090
27.0 F%%%..... %%F
MHZ ! ! ! ! !
00 06 12 18 24

HOBART-PAPUA NEW GUINEA 3711
27.0 FFFFFFF%. FFF
MHZ ! ! ! ! !
00 06 12 18 24

ADELAIDE-P.N.G. 2960
27.0 FFFFF%%%%. %FF
MHZ ! ! ! ! !
00 06 12 18 24

BRISBANE-NEW ZEALAND 2506
27.0 F%%%%. %%F
MHZ ! ! ! ! !
00 06 12 18 24

ADELAIDE-NEW ZEALAND 3214
27.0 FFFFFF%. .%F
MHZ ! ! ! ! !
00 06 12 18 24

DARWIN-NEW ZEALAND 5321
27.0 FFFF%%%. %FF
MHZ ! ! ! ! !
00 06 12 18 24

These GRAFEX predictions present the expected HF propagation conditions between Australia and a number of DX areas. Note that the predictions are given in Greenwich Mean Time from 0000 to 2300 hours reading from left to right. Each prediction shows the circuit name, distance between the terminals and information on propagation for the 24 hours. A GRAFEX symbol describes the predicted propagation conditions at 27MHz for one hour. The letter "F" designates the best conditions for HF communications.

GRAFEX prediction charts are supplied courtesy of the Ionospheric Prediction Service, Level 4, 15 Help St, Chatswood NSW 2067. IPS offers pre-recorded telephone information. To access the service, please phone (02) 414 8330.

LEGEND TO GRAFEX SYMBOLS

. Propagation is possible but probably on less than 50% of the days of the month.
% Propagation is possible on between 50% and 90% of the days of the month.
'F' Propagation is possible by the First F modes on at least 90% of the days of the month.
'E' Propagation is possible by the E modes on at least 90% of the days of the month.
'M' Propagation is possible by both the First and Second F modes on 90% of the days of the month.
'S' Propagation is possible by the Second F mode on 90% of the days of the month.
'A' High absorption — above the ALF but probably too close to it for good HF communication.
'X' Complex mixture of modes including the Second E mode.

DATE AUGUST 1991 — ADDRESS NO. 8303

SYDNEY-JAPAN 7825
27.0 FMMMMMMMMF%..... %MMF
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-MIDDLE EAST 12903
27.0 .%%%%%F%.
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-CENTRAL EUROPE 16090
27.0 .....
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-SOUTH AFRICA 11036
27.0 %MMM%.
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-C&E.COAST USA 15712
27.0 ... .
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-WEST COAST USA 11951
27.0 %MMM%M%%... %%%%%
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-WEST INDIES 14950
27.0 F%%%%.. .FFFF
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-SOUTH AMERICA 13180
27.0 FFFF%%%. .FFF
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-NORTH AFRICA 17109
27.0 .%%%..
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-PAPUA NEW GUINEA 2740
27.0 FFFF%%%%.. .FFF
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-ENGLAND SR 16993
27.0 .....
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-WEST AFRICA SR 16428
27.0 %%. .%. %%
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-ENGLAND LR 23031
27.0 ..
MHZ ! ! ! ! !
00 06 12 18 24

SYDNEY-WEST AFRICA LR 23596
27.0 . .. . %%..
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-JAPAN 7923
27.0 MMMMMMMMMMM%%.... .M
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-MIDDLE EAST 10077
27.0 %%MMMMMMMF%.
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-CENTRAL EUROPE 13575
27.0 ...%%..
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-SOUTH AFRICA 8315
27.0 %FMMM%%
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-C&E.COAST USA 18614
27.0 ... ..
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-WEST COAST USA 14743
27.0 %%%%%. %%
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-WEST INDIES 18005
27.0 %%%%%%.. %
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-SOUTH AMERICA 14569
27.0 %%%%...
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-NORTH AFRICA 13941
27.0 .%%%.%%.
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-PAPUA NEW GUINEA 4073
27.0 .%%%%..... .
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-NEW ZEALAND 5255
27.0 %FFF%%%. .%
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-ENGLAND SR 14480
27.0 .....
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-WEST AFRICA SR 13804
27.0 . %FFF%.
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-ENGLAND LR 25544
27.0 ...
MHZ ! ! ! ! !
00 06 12 18 24

PERTH-WEST AFRICA LR 26220
27.0 .%. .
MHZ ! ! ! ! !
00 06 12 18 24

MELBOURNE-P.N.G. 3157
27.0 FFFFFFF%%. FFF
MHZ ! ! ! ! !
00 06 12 18 24

BRISBANE-P.N.G. 2090
27.0 F%%%..... %%F
MHZ ! ! ! ! !
00 06 12 18 24

HOBART-PAPUA NEW GUINEA 3711
27.0 FFFFFFF%. .FFF
MHZ ! ! ! ! !
00 06 12 18 24

ADELAIDE-P.N.G. 2960
27.0 FFFFF%%%%. FFF
MHZ ! ! ! ! !
00 06 12 18 24

BRISBANE-NEW ZEALAND 2506
27.0 F%%%%.. .%%F
MHZ ! ! ! ! !
00 06 12 18 24

ADELAIDE-NEW ZEALAND 3214
27.0 FFFFF%%%. %%F
MHZ ! ! ! ! !
00 06 12 18 24

DARWIN-NEW ZEALAND 5321
27.0 FFFF%%%. %FF
MHZ ! ! ! ! !
00 06 12 18 24

Rob Williams reviews the...

ICOM IC-R72 Communications Receiver

I'm not as accustomed to Icom products as I would like to be. Then again, are any of us? This Japanese company have long been turning out some of the best receivers, amateur radios and commercial two-way equipment on the world market and it's a fringe benefit of working for CBA that you get to put gear such as this through the hoops. So I was understandably eager when Icom Australia's Duncan Baxter made an IC-R72 available for review.

Most SWLs will consider the IC-R72 to be a "little brother" version of the best-selling R71. However the R72 can stand on it's own rubber feet and hold its head high among the competition in the very promising mid-priced shortwave and ute monitoring market.

The engineers at Icom have always embraced modern technology and once again this has enabled them to build a radio that is big on performance yet small in size.

Consider the R72's dimension - a compact 241 x 94 x 229 mm, weighing just 5.5 kilos. Into this they've packed continuous coverage from 250 kHz to 29.9 MHz with essential modes (SSB, AM and CW) and useful features. In fact, some of these features are quite advanced and make you wonder if "no frills" is really an accurate tag.

The R72 is a neat and uncluttered-looking receiver with all controls well laid out and clearly labelled. As soon as I unpacked the radio it was powered up and tuning across the bands without a glance at the instruction book. Obviously to get the most out of the R72's more advanced features you will need to sit down and go through the manual. This is sometimes hard to do when you've seen as many of those Japlish (half Japanese and half English) handbooks as I have but, this is never the case with Icom.

They have put plenty of thought into designing and writing this manual and it is very easy to find just the information you need thanks to a large two-page illustration of the receiver with all controls and features cross-referenced to their page number. Plenty of space has been devoted to setting up the radio including choosing the right antenna, cable terminations, power supplies and connecting a tape recorder. This radio has a lot to offer and to get its full potential you have to set it up properly. In the long run this will pay off with some very good DX catches.

TUNING STEPS A PLUS

The R72 offers 12 different tuning steps which make it easy to move from one end of the band to the other. Icom have achieved this by manipulating the tuning circuitry around two buttons marked kHz and MHz and located next to the main tuning dial. Hit the MHz key and dial up the appropriate slot; then press the kHz key and step up or down through the band. Pressing the kHz key twice will reduce this incremental tuning to a tiny 10 Hz, important in decoding RTTY, fax and other exotic transmission modes which require precise tuning. You can also program the R72 to move in steps from 1 kHz to 10 kHz, which is great when you are working in bands with defined channel spacing such as the 9 kHz slots of the AM broadcast band.

Good price, better features and the best performance in it's range... Icom's new "no frills" R72 receiver is a winner, says Rob Williams.

THANKS FOR THE MEMORY

More and more high-end receivers are boasting programmable memories and the IC-R72 is fitted with a full 99 channels. These are handy for quick and accurate access to your favorite shortwave stations or ute services. For SWLs one of their main uses is to check parallel channels for the best path to your location.

Many of the big gun broadcasters transmit the same signal over a whole range of frequencies and I often used the main VFO and as many memories as required to find the best frequency out of the group. You can punch in the channel number from the keypad or step through them in either direction using the up/down keys.

REAL RECEIVERS DON'T SCAN

Another trend has been for Japanese manufacturers to import "scanner" techniques into the shortwave world. The aim is to make these receivers perform the same way as their VHF/UHF cousins: to "scan", stop on busy signals and on the whole make SWLing a push-button procedure.

But, alas it doesn't work too well on HF. The basis of scanning is that the receiver will stop on a signal above a predetermined level, typically the setting of the mute or squelch control. This isn't noticed as much on scanners because most signals are in FM and so tend to be very strong across much of the receivers' squelch range.

But, the HF bands can be alive with more crackles and pops than your favorite breakfast cereal. And the noise level can and does vary significantly from one band to another, so an adequate squelch setting on one group of frequencies may be unsuitable for effective scanning elsewhere on HF. And if you try to overcome this by setting the squelch higher you'll miss the weaker stations. Yes, this can happen with a VHF/UHF scanner but, it is more common on HF

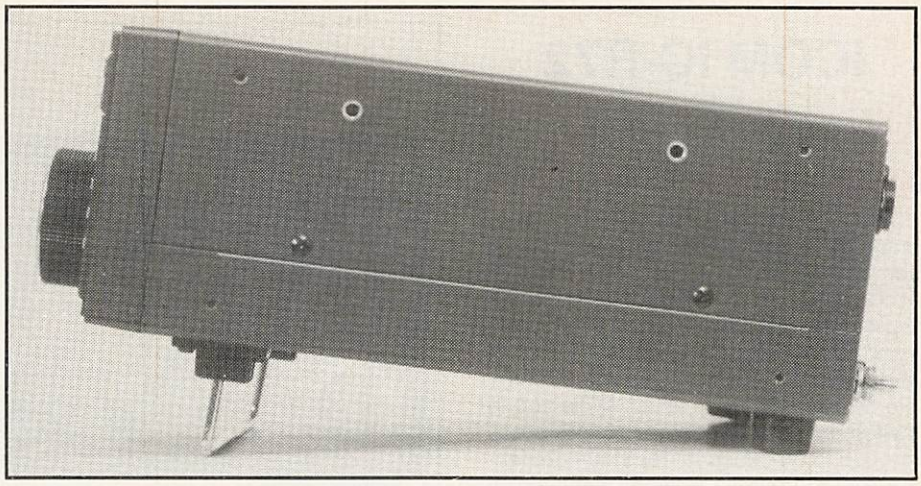
and harder to overcome.

There are two scan speeds to choose from and the ability to switch in a delay which recommences scanning after ten second on a busy signal or two seconds after a transmission has ceased.

For what it's worth the R72 has four scan modes.

"Programmed scan" searches for stations within a specified frequency range and is identical to the "search" facility on VHF/UHF scanners. "Memory scan" limits the R72 to flicking through all 99 memory channels (or however many have actually been programmed) in the same way as a normal scanner works. You can lock individual channels out of the scan sequence in "selected memory scan" mode.

There's also a handy "auto memory write scan" mode, which takes an upper and lower frequency limit, searches between them and writes all active frequencies directly into memory channels 80 to 99. This mode only operates on AM and FM signals, not on SSB where it would be perfect for logging new utility traffic. But, Icom's reason for this is a good one - auto-searching doesn't work too well when a radio finds it hard to discriminate between noise, images from adjacent channels and actual signal and carriers. As a result you get a memory bank full of frequencies that offer nothing but, noise. So when it comes to ute DXing you'll just have to be patient and use your ears, mind you they're one of the best discriminator circuits ever built! If Icom do expect the memory scan modes to be used on a regular basis then it would be better if they adopted the scanner practice of dividing the memory channels into "banks", for instance five banks of twenty channels apiece. This would allow users to remove wholesale slabs of memory channels from the scan sequence and better organise memory allocations and scanning groups for utility monitors.



Above: The rig is quite compact and weighs just 5.5 Kg.
Below: Front panel is typically ICOM, neatly laid-out and easy to operate.

MORE USEFUL FEATURES

Have you ever spent long minutes patiently fine-tuning that fascinating sideband utility station only to bump the dial and find yourself half a meg down the band? Maybe it's happened too often to the designers of the R72 because they've sensibly included a "lock" button which temporarily disables the main VFO. The other controls remain active so you can still use the keyboard to change the frequency, change the mode or do anything else you need to.

You can also vary the speed at which the AGC (Automatic Gain Control) operates. All radios use an internal AGC to compensate for fluctuations in signal strength due to variations in the ionosphere. Normally the AGC works "in the background" without you even knowing it's there but, there are occasions when you want to be able to vary the rate that it reacts to a change in signal level.

Listening to voice, for example, you can reduce the annoying background noise that comes up during breaks in speech by putting the AGC in a slower setting. As a general rule Icom suggest setting the AGC to "fast" when tuning across the band or listening to AM/CW, and "slow" when working with SSB.

For some reason manufacturers have decided that we need the radio to beep at us every time we operate a switch.

Well I don't want may radio talking back to me and I'm glad to say that with the R72 Icom have taken this into consideration. You can disable the beep from the keypad, or remove the rig's covers and adjust the volume level...a nice touch which many of the more expensive radios simply ignore.

(continued over page...)

ICOM IC-R72

(continued...)

BUILT-IN PRE-AMP

The IC-R72 features a built-in pre-amplifier to boost those weak signals by some 10 dB, although this is only effective above 1600 kHz. I tended to leave the pre-amp in-line unless I was listening to very strong signals. And speaking of strong signals, next to the pre-amp control are two push buttons which allow you to switch in attenuation in 10 dB steps through to 30 dB, great for those deafening Radio Australia transmissions which overload even the best of radios.

The internal speaker is adequate for clean signals and casual listening however you'll find a vast increase in audio performance if you connect an external speaker.

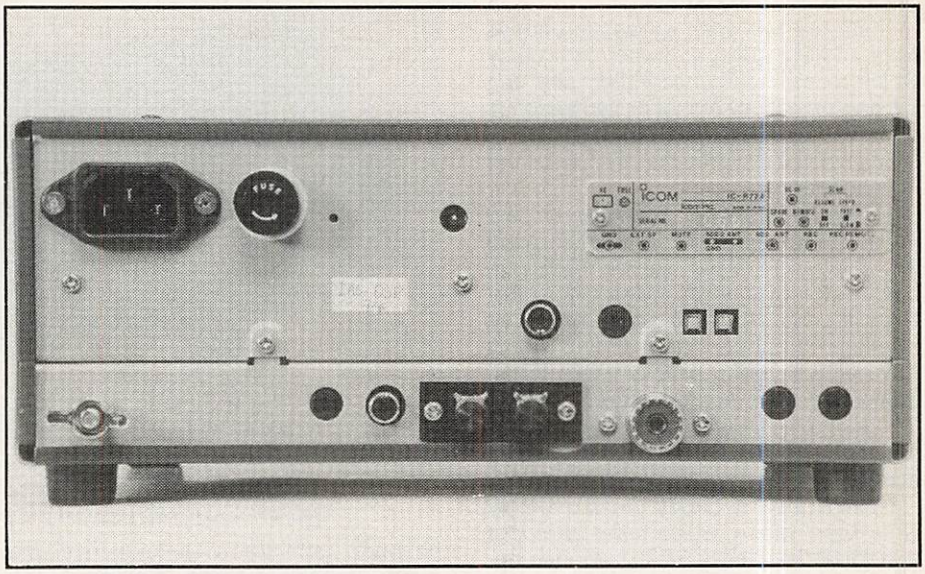
This has the added advantage of directing the sound towards you, not up, down, to one side or wherever the receivers' own speaker is mounted.

As with most of todays' high-tech receivers Icom have tapped into the precision of computer circuitry to provide a 24 hour clock, sleep function and timer facility. This last feature can be used to provide unattended recording through tape jacks on the rear panel.

The squelch setting is applied to the tape output and helps in controlling unwanted tape operation. Or you can dial up your local mediumwave broadcaster and turn the R72 into a very impressive-looking clock radio! I did find a minor "bug" in that if you are scanning and decide to call up the time display the scanning will stop, but, this is nothing serious.

The noise blanker is supposed to be for the suppression of pulse-type noise which commonly emanates from car engines although I wasn't overly impressed by this. To be fair to Icom and the R72 I have never seen an effective pulse noise blanker on any radio, from $10 to $10,000.

The rear panel includes a resume button (for use in the event that the CPU chip locks up and has to be re-booted); the scan speed switch; and two jacks for tape recording. The two antenna sockets allow for a choice of aerials to be connected. You can go for the high impedance or 500 ohm random length long wire, your garden-type aerial and the one that almost every SWL starts off with. Or if you have a trusty old dipole the hook into the 50 ohm low impedance socket. Icom do caution that using both types of antennas together may degrade the performance of your radio.



Rear panel has two tape recorder outlets, scan speed switch and two antenna sockets for 500 or 50 ohm feeder line.

TOMORROWS' RADIO, TODAY

The modern receiver is driven by a tiny computer-on-a-chip. This microprocessor or CPU automatically tunes and retunes the radio across the band, controls the various features and of course allows you to store and manipulate memory frequencies, scanning and so on. If you can do all this using the radio's tiny CPU then what might happen if you could put the power of your desktop PC behind the rig? All Icom radios have a unique facility which allows you to connect the unit to a personal computer and control it directly from your PC. If you own several Icom sets they can all be controlled from the one computer. Icom's optional boxes of tricks connect between the receiver and the PC and partnered with specially-written software you can tap away on your computer keyboard and directly change the frequency, mode and memory channels through your computer. American DXers have spent many hours developing software to drive Icom radios and you can expect to see more in this area in the years ahead.

A PLETHORA OF POWER

The IC-R72 is fitted with three internal batteries although I think Icom have gone a bit overboard here.

There are two lithium cells, one to retain the memory for up to five years and another for the clock and estimated life by Icom is two years. On top of this there is a back-up battery which can power the radio in normal operation for up to one hour, however, our demo model didn't come with this fitted so we were unable to evaluate it's performance. This facility is nice to have, but, won't see much use unless your main's supply is unstable, but, I suppose it is good in case of short-term emergency blackouts. Alternatively you could run the radio on an external 12 volt source such as a car battery. I once lived in an area where storms were constantly bringing down the local power lines and I had provision for all of my gear to be sourced from 12 volt car batteries.

ACCESSORIES GALORE

The IC-R72 has more accessories than you'll ever need. As well as three different types of external speakers and communications headphones there is an optional CW filter, high stability crystal unit, FM receive module, plug-in voice synthesizer, computer adaptor, mobile mounting bracket, carrying handle, cigarette lighter cable with noise filter, world clock and finally a DC power cable.

Of the external speakers the best one to look at is the SP-20 which is fitted with audio filters. I found the radio to be stable enough for general DX work without additional crystals. How much FM is there on HF? Only a small amount right up at the top end of 10 metres and personally speaking I wouldn't think it worth the cost of the FM board.

SUMMARY

Icom have built a powerful radio which can make any DXer into a professional monitor. It isn't loaded down with lots of fancy controls to pull shortwave signals out of the ether but, it is still a quality communications receiver. Sensitivity and selectivity on all shortwave bands is good and very hard to fault. If you're in the market for a new shortwave radio, or looking around to improve on what you already own, the R72 demands your attention.

SCANNERS?

Argent is right up-to-the-minute on the hobby of scanning. Full range of the latest and best scanners, including Uniden, and the outstanding ICOM ICR1. This miniature hand-held, which fits into your pocket, covers from 100 Khz right through the international short wave frequencies, and on through VHF-UHF frequencies right through to 1300 Mkz.

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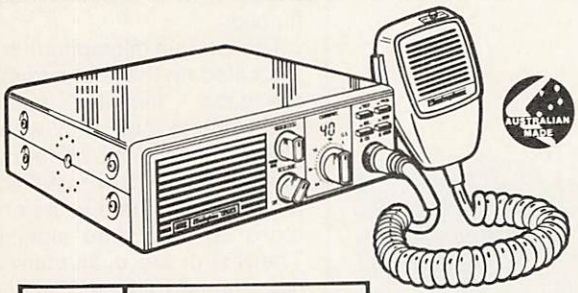

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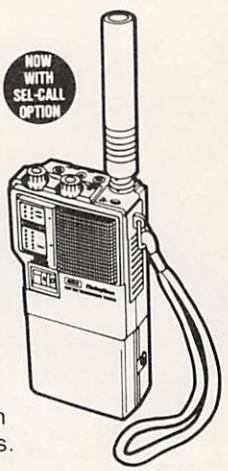

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Ken Reynolds of Powerband Communications reviews the...

Cobra 146GTL

"Good quality and value stands the test of time", is a sweeping statement that describes too few products in the world today. The CB industry is no exception to the rule...product names appear and disappear with relentless regularity leaving only those "few" perennials that never seem to die.

The COBRA name products come from the American Dynascan Corporation of Chicago, Illinois which has been a well respected name in the industry for many years and the Cobra 146GTL AM/SSB CB transceiver is one of the true survivors in a market that is as changeable as the famous Melbourne weather.

THE REASON...?

The Cobra 146GTL package is probably one of the best examples of CB performance, reliability and constructional integrity that has ever graced the shelves of a CB radio store. Like few other CB rigs, it has stood the test of time and in 1991 it is still a benchmark against which we tend to measure the new contenders. Very few ever shape up to this standard - they either have reliability problems, performance peculiarities or some other aberation that mars the package as a whole.

There is a common denominator among the top few rigs which we will discuss later, but, for the moment let's take a look at the COBRA 146GTL and see what it has to offer.

Good, better or maybe even best. The Cobra 146GTL is an old design, but, still one of the best rigs available

The COBRA 146GTL is still quite an attractive looking rig considering its styling is more than 15 years old and the only thing in my opinion that dates its appearance is the over use of "bright silver against black decals" that completely describes the front control panel. However, as you can see from the photograph, the day is saved by the sensible layout of the controls which allow easy operation of all the functions, even for clumsy fingers.

ANALOGUE OR BAR-GRAPH ?

Cobra has retained the original analogue style signal strength/RF output meter which is favored over the new "smart" bar-graph displays that might score points in the VCR entertainment industry but just don't "cut" it in communications. (I deal with CBers every day and very few ever have a kind comment about the bar-graph designs).

HELLO manufacturers....do you ever listen to what your customers want?

The control line-up from left to right is; Combination AF Volume and Power On/Off followed by Squelch, RF Gain, Mode Switch, VOICE LOCK and Channel Selector Switch. VOICE LOCK is Cobra language for Clarifier which is radio language for fine tuning. Over the years we have heard some outrageous claims about the benefits of the Cobra Voice Lock control. Regardless of what you might be told, VOICE LOCK is just another imaginative marketing ploy and still just means Clarifier. The only other two controls are a pair of switches, one that operates the noise limiting circuits while the other changes the mode from CB to PA (public address) function.

The four-pin microphone socket is located on the left hand side of the case - like it or not. The microphone supplied with the Cobra is one of the better quality units that used to be supplied with a number of other rigs before the extra cost became significant. The rest of the outfit consists of the standard pressed steel case halves covered with fine grained black vinyl laminate.

STRONG and TIDY - JUST LIKE ALWAYS

Internally, the main sub-frame is constructed from two pressed steel side rails which are attached to an aluminium rear panel with real machine screws rather than "self-tappers" that are becoming so common place these days.

The whole metal construction is strong and tidy just like it has

always been. There are virtually no wires to rattle about and finally metal fatigue and break off when you are in the middle of the Simpson Desert and, because all the components are of relatively low mass, they only develop a small moment of inertia and don't "leap" off the circuit board as you bounce your way down some corrugated gravel road in the out-back. Which means, the Cobra is even less likely to "play-up" riding round the city in your limmo".

The phenolic type circuit board is "single-sided"- using wire straps instead of the more modern printed wiring on both sides of the board - and the component layout is quite good for the design's considerable age.

PERFORMANCE - GOOD BY ANY STANDARDS

The receiver performance is good by any CB standards with an AM sensitivity of 0.27microvolts for 12dB SINAD and only slightly less on both upper and lower sidebands.

The Squelch threshold was 0.3microvolts and the "tight" condition (maximum) required 700microvolts on AM and a snip over 2,000microvolts in the SSB mode.

The RF gain control offered a generous 42dB attenuation at its minimum setting which should be more than adequate for close-up convoy work where at the maximum gain position you would notice considerable distortion on such strong signals.

The noise limiting circuits are as effective as any other top rig we have tested and are particularly good at eliminating vehicle ignition interference on AM signals and particularly poor at removing power line "buzz" that seems to permeate the whole world.

Voice Lock works just like a clarifier and gives you about plus or minus 1kHz adjustment for off frequency stations.

Recovered audio from the receiver is good to excellent from the internal speaker, but, as with most rigs, the addition of a good quality external speaker enhances the sound even more.

THE TRANSMITTER IS EXCELLENT

I have lost count of the number of rigs I have reviewed in the past 15 years, but, it numbers in the hundreds. In that time there have been few occasions when I could honestly say the transmitter performed exactly the way it was supposed to.

On AM the modulation peaked nicely to 100 per cent and it was difficult to cause over-modulation under most conditions. AM power out was 4.3 watts while sideband offered exactly 12 watts PEP unless you really gave it a blast. After warm-up there was virtually no frequency error except for a slight wandering of a few Hertz (cycles per second) that is imperceptible to the human ear.

While it is teriffic to see such tight QA on this rig I'm pretty damned sure that coincidence is somewhat responsible for this snappy little package being "just right".

While not wishing to detract from the excellence of this rig, there are a number of factors which can cause professional grade equipment to fluctuate slightly during transport from one suburb to another, so, considering the rough ride this rig experienced getting from the Phillipines to Australia you can guess why I'm a bit sceptical.

Still, let's face facts, the same cartage problem applies to about 95% of the rigs available on the Australian market and the 146 was away ahead of many of them.

On air tests gave the expected result with all reports indicating that the rig is as good as we thought

COMPREHENSIVE MANUAL

The owners manual is comprehensive and is packed with extra information like how to wire up a different microphone, some operating procedures for handling urgent messages, on-air etiquette and the good ol' reliable "10" code.

THE COMMON DENOMINATOR

Now, let's talk about the common denominator I mentioned earlier.

Many readers will have heard of one rig being so like another that they would swear they were the same units with just a few minor alterations.

Commonly called Badge engineering, the practice is widespread throughout the world and includes motor cars (Toyota Camry/Holden Apollo, Nissan Patrol/Ford Maverick, etc.), TVs, VCRs and...CB radios.

The Cobra is very similar to the Uniden AX-144.

Except for the front panel and controls the rigs are nearly identical, both physically and electrically.

It's interesting to note that when a 27MHz replacement radio was required by our sister magazine 4x4 Australia for the resident backup Landcruiser, the staff chose a 146GTL after looking at what was available.

The Cobra is made for the Dynascan Corp in the USA and distributed in Australia by Hatadi Electronics Corp in Sydney.

SUMMARY

The COBRA 146GTL is an excellent example of an item of well designed and built consumer equipment that offers excellent performance and reliability seldom equalled within the price range. It has been time tested and any minor defects that existed with the original design - a few "dry" joints - have been cleaned up years ago in the process of evolution. If you can cope with the fact that the Cobra is not the most compact 27MHz CB transceiver on the market, and given the present competitive prices available, it's pretty hard to find better value.

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DX - UP, DOWN and AROUND 11 METRES ***...with Jack Haden***

Excellent band openings have been part and parcel of 11 metres recently, with a double serve of Europe, the Middle East and North Africa via both the long and shortpaths. On some occasions the band has been behaving in a most strange manner, one evening around 114Oz I could receive quite good signals from the US and Canada, something that is normally restricted to daylight openings.

Some DXers have been grumbling about some of the recent DXpeditions asking for a $US2 "donation" and rightfully so, it is hard enough and expensive enough procuring $US1 to send off let alone two, especially when some of the more shonky DXpeditions fail to send a card back. The best method is to work only the DXpeditions from prominent clubs if you expect a return, but then again if you really need the country confirmed then you may as well take the risk. Catch 22?

The old argument of Lower Side Band versus Upper Side Band has reared its ugly head from time to time, just a week or so back I heard an irate US station abuse a lady operating from Victoria who was trying to work a DXpedition on the USB mode. Quite a slanging match took place with the American becoming quite abusive and threatening to jam the frequency. It is common knowledge that the yanks like to use LSB mode and become irate when interfered with from USB, but there is nothing that can be done about it, except move to another part of the band, unless of course you like an argument.

How observant are you as a DXer?

On a number of occasions when the 27MHz portion of 11 metres is relatively quiet DX wise, I have found the 26MHz portion to be wide open with some big signals about and vice versa. A number of New Zealand CBers are not too happy about DXers using SSB on their legal AM section of the 26MHz band either, a part of the parcel of out-of-band out-of-hand? Then again the number of New Zealand stations appearing on 27MHz (illegally) has doubled in the past couple of years.

AFRICAN AND INDIAN OCEAN REGIONS

North Africa has been coming in via both the longpath and the shortpath giving us a double chance of picking up a new country from that region. At 2O58z via the longpath I noted 1O6-AT-1O8, operated by Jose in Melilla, a Spanish colony in North Africa. Jose was five by eight at the time and a little later was followed by 1O6-AT-1O6 operated by Fernando, also from Melilla. Fernando was five by three at 2155z and had no shortage of stations wanting to work him.

The Madeira Islands have been about via the longpath by way of Alves, who signs as the 119-AT-1O4 from Funchal, the capital. Despite his poor English, Alves managed to put a few Australians through and at 2339z he was five by five.

Plenty of activity from the Canary Islands has been noticed on both paths and at O319z I logged AV-3154, operated by Carlos. Even though Carlos was off frequency and had terrible modulation, he was five by nine plus 2ODB at the time.

At O4O1z I noted a station simply calling as TANGIER RADIO, presumably from the capital of Morocco. He was only four by one at the time and soon faded.

A rather poor signal from Zambia was heard at 0618z by way of 78-AT-1O2, name unknown. He was three by zero at the time and was receiving a lot of attention from Europe where his signal was much stronger.

Ethiopia has been about at odd occasions by way of Carl, a Canadian working in the country. Carl signs as 1O8 and was noted at O355z with a poor four by one signal report.

Plenty of activity has been heard from South Africa with a variety of stations being logged. One of the strongest was 44-E-57, operated by Dick in or near Johannesburg, and at O63Oz Dick was a five by nine plus 1ODB and by O645z had faded out entirely.

Walvis Bay was logged at O444z by way of Peke, a truck driver from South Africa. Peke, although only using 25 watts into a stainless steel mobile antenna, was five by two and had no shortage of takers. Peke was signing as the 893 Portable, and sorry, he doesn't QSL.

Zimbabwe was present on the band at O633z by way of Karl, who operates as the ZB-102. Karl was five by eight at the time and was busy with quite a pile of stations.

A weak signal from the Maldive Islands was logged at O840z by way of a station signing as 152-SR-??, name unknown. He was a miserable four by zero at the time and was soon lost under the rabble of Europeans.

A station signing as the 193-AT1O2, from Cocos Keeling Islands, was heard briefly around O455z with a five by six report, but subject to noise from the Italians persistently calling him.

MIDDLE EAST & ARABIA

Stations from a now liberated Kuwait are starting to find their way back on air again and of course have some interesting stories to tell about their past ordeals under the repressive Iraqi regime.

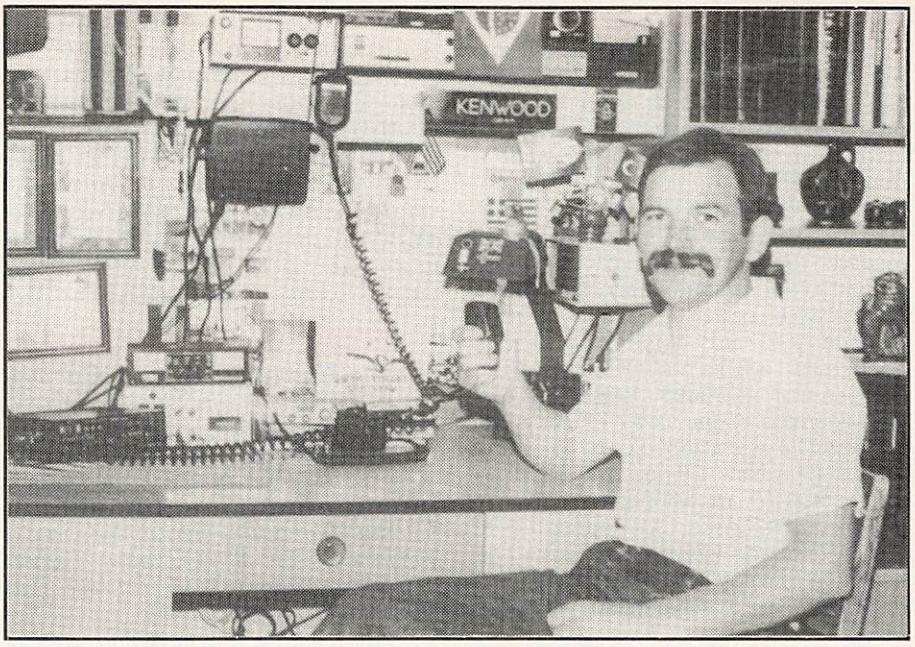
The first station from Kuwait that I heard was Bander, who was signing as the 1-KA-56 back in early April. Bander was five by six here at 1O25z and was of course much sought after as DXers were keen to find out what was going on in the country and to find out news of fellow Kuwaiti DXers and their whereabouts. At O338z on 14 April, Hassem appeared on air as 1O2-AT-1O8 from Kuwait and was kept busy for two hours answering questions and informing all those who were interested of what went on in the country during the occupation by Iraq. Hassem was a good five by nine at the time and the signal held up very well. Welcome back fellows.

Lebanon has been coming in quite well both on the long and shortpaths, although signals seem to favor the shortpath openings. Jean, the 112-NU1O1, was heard at O621z with a five by three signal and was closely followed by the 1-MAC-O1 operated by Amer from Tripoli. Amer was five by nine plus 1ODB at O652z. Amer also signs at 112-SR-1O1.

Turkey has been about for those who still need this one, with quite a large number of stations to choose from. At O5O6z I logged 116-AT-1O4, operated by Soyham from Kiziltoprak, near Istanbul. Soyham was five by five at the time and was soon followed by 116-IS-24O, operated by Borgas. At O521z he was a good five by six. Also noted was 116-PW-15Oz with a five by three report.

Saudi Arabia was logged via the longpath at 2246z by way of Yannis, who signs as 48-AT-103. Yannis was a poor four by two and never became stronger. QSL manager for Yannis is 1-AT-067, in Italy.

Another signal from Saudi Arabia was an American signing as REBEL-O25. He didn't give his name but mentioned he was on the Saudi Arabia-Kuwait border and that he didn't QSL. He was logged at O34Oz with a five by three report via the shortpath.



One of the many signals from Poland comes from Andrea who signs as the AQF from Lukow, Poland.

Israel is still about the band and as usual the big-gun signal from Tolly, who signs as DELTA STATION, was about. At O616z Tolly was a good five by nine plus 1ODB. Later in the evening 97-AT-1O1 appeared on the band at O731z with a five by six report.

Egypt appeared by way of Kostas, operating maritime mobile from a large bulk carrier passing through the Suez Canal. Signing as SV-1OO, Kostas was a good five by eight report at O711z.

EUROPE

The longpath to Europe has produced some good DX opportunities and the path has been opening from daylight onwards on odd days with good signals coming through.

At 2O58z I was most surprised to hear 27-AT-117, operated by John in Iceland, coming in with a very poor four by zero signal. John operates from Keflavik in Iceland and despite some intense monitoring his signal did not improve.

Also on the longpath was 165-AT-131, operated by Riccardo from Sardinia Island. At 2107z he was a good steady five by six and had no shortage of takers to the call.

Jersey Island was logged at 21O2z via the longpath with a good signal from 167-CV-O1, name unknown. He was five by seven at the time and was soon followed by 167-CV-O2, operated by Jose, at 225Oz with a five by two report. Jose advises his QSL manager is 14-AT-749.

Andorra was also noted on the longpath by way of Jose who signs as the 51-AT-1O1 and at 2315z he was a poor four by one and at the time was just above the noise level.

On the shortpath at 1O39z I heard 179-AT-1O1, operating from Czechoslovakia with a fair five by two report. He had quite a pile-up on his hands from Western Europe.

Bulgaria is still about if you need it by way of regular DXer Angelo who has been kept quite busy signing as the 178-AT-1O1 (ex 178-NE-1O1). Angelo was a good five by nine at O521z and as usual had a pile-up on his hands.

Poland was logged at O6OOz with the appearance of Eva, who operates as the 161-EU-1O1 near Warsaw, the capital. Eva was five by nine at the time and the signal held for nearly one hour.

Gibraltar was noted on the band at O7OOz with 55-AT-1O2, operated by Joe, leading the way with a good five by nine plus 1ODB signal. With that big signal Joe soon found he had a pile-up on his hands from the Pacific region.

Iceland also appeared on the shortpath by way of 27-AT-1O6, operated by Odin, and at O518z he was only a poor four by two and was chasing a Japanese station at the time.

Luxembourg was logged at O7O2z with a five by three report from a station signing as 54-AT-114, no name recorded. I think by now everyone should have Luxembourg in the bag so to speak.

A number of stations from Switzerland have been active with the strongest signal coming from 15-AT-1O6, operated by Mauro. At O714z Mauro was a good five by nine but subject to competition from the Italians.

Some big signals have been heard from the Balearic Islands with 49-AT-131 leading the way. At O659z Paco was a big five by nine plus 2ODB and later in the evening I noted 49-AT-102 operated by Jaime with a five by nine report at 1O35z.

Monaco is still around for those who still need this one and at O532z I heard Henri who signs as 1O7-SR-1O1 on the band. Henri was a reasonable five by five and had quite a sizable pile-up chasing him.

Many good signals have been coming from Greece and at O6O3z I logged a good five by nine signal from Leonardis, who signs as the 18-AT-134 from the island of Kefalonia.

CENTRAL/SOUTH AMERICA & THE CARIBBEAN

The odd portion of choice DX can be found from this region, providing of course you can hear them through the big signals from mainland South America.

The British Virgin Islands have been about by way of Worrell, the 128-AT-1O1. At O551z Worrell was a good five by seven report and mentioned he may be closing down the station due to QSL problems etc. Worrell operates from Tortola. Bermuda is around from time to time, although this country seems to have a poor track record in the QSL department it is a case of work it now and worry later. At O43Oz I heard Dennis, who operates as the 152 from Southampton on Bermuda Island. Dennis was a usable four by three at the time. The following day I logged a station signing as 123-CF-866 operated by Sid at O353z, as with Dennis the previous day Sid's signal was poor too and subject to heavy noise from South America and the US.

Honduras has been about by way of 28-AR-O1, operated by George. At O611z George was a good five by eight and had quite a number of people calling. A big signal from the island of Guadeloupe came by way of Chris, who signs as the 196-AT-1O3. At O459z Chris was a good five by nine steady and the signal held for some time.

Suriname is still around for those who need it, but beware of QSLing as its track record is not too good in the returns department. At O517z I heard a station signing as 73-WD-1O2 from Paramaribo, the capital.

As usual the big signals from Uruguay, Brazil and Argentina are about and come in quite early from daylight onwards through until sunset, giving one plenty of time to hunt about for them. One big signal that I enjoy listening to comes from Nicola, who signs as the 4-AT-1O4 from Buenos Aires in Argentina. I don't know what she is running but is rarely under a signal of five at any given time.

(continued over page...)

ASIA & THE PACIFIC REGION

Not a great deal to report from this region, as usual the regulars are about just to remind us that there is good propagation to the region. Macquarie Island, down towards Antarctica, made a rare appearance on the band by way of John who was signing as the MI-15. John was five by two at O558z and is with a research team in the Antarctic region for around a year. Unfortunately John, who is from Austria, doesn't seem to be interested in QSL cards etc. Easter Island is about, and so is its bad QSL reputation. Besides that, at O640z I logged Luciano who operates as the 144-AT1O4 on the band and he was a good five by five at the time. Papua New Guinea was about by way of 1O1-AT-14. Supposedly from the Mount Hagen area, Jon appeared at O315z and was five by three here and despite a few conflicting beam headings (maybe a slim!) Jon maintained he was in PNG.

Thailand was heard on the band at O75Oz by way of Alan who signs as the 153-SR-O3. Alan was a good five by seven and was quite busy dealing with a mass of Europeans.

South Korea was represented on the band by Mr Hong who operates as the "RP" from Seoul, the capital. Mr Hong was a good five by nine at 2257z.

From the Asian sector of the USSR there has been much activity and at 1136z I logged a good five by nine signal from Frank, who signs as the 50-SU-O18, from Sochi on the Black Sea. Frank had quite a pile-up on his hands and his signal faded gradually some time later.

Azherbijan has been about for those who still need this one. On the band at 1O31z I heard Alex, who operates as the 3O3-AT-1O3, and although only a poor four by one he had no shortage of callers from Australia.

Turkmenistan is still about for those who need this one and at 1O46z I noted 314-AT-1O1, operated by Victor, on the band. Victor was a good five by five at the time and was looking for Asia and the Pacific.

Quite a bit of activity from Kazakhistan has been noted recently with a good signal coming from Andy, who signs as the 3O8-TN-1O1. Andy was very strong with a five by nine report but subject to heavy interference from western Europe at the time.

Also from Kazakhistan was another Andy, who operates as the 312-NE-1O1, and at O648z he was also a five by nine and had the usual pile-up of western Europe in hot pursuit thus making it difficult for those in Asia and the Pacific.

Kazakhistan was again represented by Alex who signs as the 3O8-SU-OO2 and at O721z Alex was a good steady five by six in the clear, the reason being he only just came onto the band and the Europeans hadn't got wind of his presence. This in turn enabled a few in the Pacific to work him interference free, which was quite a change!

Beware of slims, the following stations are reported to be slims so do not get trapped into QSLing with these people: 261-AT-0 Chatham Islands, this station is portable in either Auckland or Wellington New Zealand. Last of all is 276-AT-1O1 supposedly operated by Don in Tuvalu. Well Don is not in Tuvalu at all, he is in Hawaii where his PO Box is!

Well, that wraps it up for another issue, good DX and 73 . . . Jack.

DXPEDITION NEWS UPDATE

Saint Martin Island *appeared on time as 2O7-AT-0 over the period of 16-17 March (if you were lucky enough then cards go to 14-AT-375 in France). Luc was five by five here at 2245z.*

The DXpedition *to Saint Marteen & Saba Eust Island appeared on time signing as 166-AT-0 on 17 March and was five by seven at O219z. Cards with all the trimmings go to 1-AT-316 in Italy.*

The DXpedition station *appeared on the band over the period of 22-30 March, signing as 137-AT-RA, and was a good five by six here at 1O5Oz. QSL cards for this one go to 137-AT-1O1 with the extra greenstamp requested going to the Rumanian orphans appeal.*

Mount Athos in Greece *appeared as 254-VAT-0 on the 23rd of March, the station was a good five by seven at O6OOz. QSL route: PO Box 84 MOUNT ATHOS, Greece, 63O86.*

The planned DXpeditions *to Dominica Island (194) and to the French Island of Martinique (136) were deferred due to lack of time, they were supposed to have come on air around early April.*

Georgia in the USSR *appeared on air by way of a DXpedition signing as the 2O6-NF-0 on 30 March, operated by Igor. There was quite a pile-up of stations and at 1O19z he was a good five by five. QSL route not known to date. Also on 30 March, 1-AT-LE2 appeared on the band for those after IOTA points and at 1220z they were a poor four by two, QSL route unknown.*

Turkmenistand and Tadzhikistan *in the USSR appeared on the band by way of Yuri, the 3O2-AT-1O5 operating portable 314 and 313 respectively over the period of two weeks in early April. Yuri was a good five by five peaking a nine most evenings around 11OOz from both locations. QSL route 1-AT-157 in Italy with contact number and return postage etc a must.*

The Republic of San Marino *was activated by a station signing as 36-RCT-0 on 12 and 13 April and at O6O3z on 12 April they were a good five by nine report. QSL via 1-RCT-OO1 Luis, PO Box 60, BADIA-RO 45O21, ITALY.*

19-AT-OOO appeared *on the band for those after IOTA points from Ameland Island and was heard both on the long and shortpaths. They were five by nine on the shortpath at O631z and five by eight on the longpath at 2116z. The QSL route is via 19-AT-OOO, Club Station in Holland.*

The rumored DXpedition to *Pakistan signing as 114-NL-O failed to appear over the period 22 March-1 May. Nothing heard here to date.*

The planned DXpedition *to Lobos Island, signing as 12-AT-DX, failed to appear as scheduled on 22 and 23 April, although only good for some IOTA points cards go via 12-AT-O31 in Uruguay.*

By now *you should have heard the operation from the Gambia as 118-AT-0 as the correct dates were 29 April-3 May and cards go via 14-AT-O27.*

Also, Ogasawara Island, *signing as 281-AT-0, should have been about for two days only on 30 April-1 May. Cards go via 25-AT-1O3 in Japan.*

Rumania has been confirmed *for the period 3-9 August as 233-NF-0 with QSL cards etc going to 14-AT-O27 in France.*

Albania has also been confirmed *for activation over the period 10-15 August with cards again going to 14-AT-O27 in France with all the usual trimmings.*

Crete will be activated *(despite rumors) over the period 19-23 August as 9O-AT-0 with cards going to 18-AT-1O9 in Greece.*

Armenia will be activated *as 3O1-AT-0 over 25 May-1 June and the QSL route is via 3O3-AT-1O3 in the USSR.*

Swaziland, *signing as 191-PW-OA and 191-PW-0B, will be activated during 1 and 2 June, with QSL route being 44-AT-116 for AT members.*

Belize is due *to be activated some time in the period May to August as the dates are not clear as yet, QSL route to be announced.*

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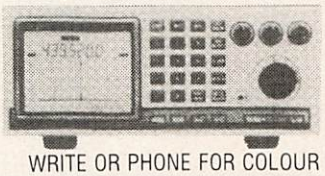

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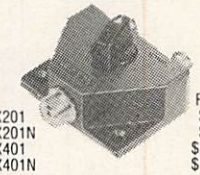

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★ Frequency Registers	$20
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D707 Active 500KHz-1500MHz	$239
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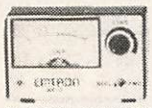

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AUSTRALIAN UHF REPEATER LIST

NOTE: Corrections and updates may be sent to: CBA Repeater Listing, PO Box E160, St James, NSW 2000.

ACT

Canberra	2/32
Canberra	8/38

New South Wales

Albury	6/36
Armidale	4/34
Barraba	6/36
Bathurst	8/38
Bega	6/36
Belbora	1/31
Binya	3/33
Blue Mountains	2/32
Bombala	8/38
Booral	7/37
Bowral	6/36
Braidwood	
Brewarrina	1/31
Brindabella Ranges	7/37
Broken Hill	4/34
Broken Hill	7/37
Buladelah	7/37
Casino	6/36
Cobar	8/38
Coffs Harbour	6/36
Coolah	6/36
Cooma	4/34
Coonabarabran	4/34
Corowa	2/32
Corowa	5/35
Corwa	7/37
Deepwater	5/35
Deniliquin	1/31
Dungog	3/33
Eden	2/32
Glen Innes	7/37
Grafton	8/38
Grenfell	1/31
Gundagai	7/37
Gunnedah	2/32
Guyra	1/31
Warden	1/31
Hay	4/34
Inverell	2/32
Jindabyne	1/31
Junee	5/35
Lismore	2/32
Manilla	3/33
Murrirundi	3/33
Muswellbrook	4/34
Narrabri	2/32
Narranderra	8/38
Narromine	5/35
Narromine	6/36
Newcastle	1/31
Newcastle	2/32
Newcastle	5/35
Newcastle	6/36
Nundle	7/37
Orange	3/33
Port Macquarie	2/32
Sydney (south)	1/31
Sydney (west)	3/33
Sydney (outer-west)	4/34
Sydney (north)	7/37
Tamworth	4/34
Tenterfield	3/33
Tumbarumba	3/33
Tumut	6/36
Tweeds Heads	4/34
Wagga Wagga	1/31
Wagga Wagga	5/35
Walbundrie	2/32
Walcha	2/32
Walcha	6/36
Walcha	8/38
Warrumbungles	1/31
Wingham	1/31
Wilcannia	1/31
Wollongong	8/38
Northern Territory	
Bushy Park	1/31
Darwin	1/31
Erldunda Station	3/33
Katherine	2/32
Maryvale Station	4/34
Mt Swan	2/32

Queensland

Alpha	2/32
Atherton	8/38
Amiens	8/38
Ayr	3/33
Barcaldine Downs	1/31
Bathurst Heads	1/31
Bauhina Downs	4/34
Biloela	7/37
Blackall	8/38
Blackwater	6/36
Brisbane	1/31
Brisbane	5/35
Brisbane	7/37
Bundaberg	4/34
Bundaberg	7/37
Cairns	3/33
Chinchilla	8/38
Clermont	6/36
Clermont	7/37
Crows Nest	6/36
Dimbulah	6/36
Dirranbandi	8/38
Double Island Point	3/33
Edward River	3/33
Emerald	8/38
Gladstone	6/36
Gold Coast	3/33
Goondiwindi	4/34
Gympie	2/32
Gympie	5/35
Gympie	7/37
Hervey Bay	8/38
Hughenden	1/31
Ingham	2/32
Inglewood	1/31
Innisfail	1/31
Ipswich	4/34
Jericho	4/34
Kilcoy	3/33
Lakeland Downs	2/32
Longreach	3/33
Mackay	3/33
Mackay	6/36
Marlborough	2/32
Maryborough	6/36
Maxwelton	2/32
Miles	6/36
Monto	3/33
Moranbah	4/34
Moura	1/31
Mt Isa	1/31
Mundubbera	6/36
Murgon	7/37
Quilpie	2/32
Rockhampton	1/31
Rockhampton	4/34
Roma	1/31
Springsure	3/33
Sunshine Coast	6/36
Sunshine Coast	8/38
Tambo	6/36
Taroom	2/32
Thargomindah	6/36
Toowoomba	2/32
Toowoomba	4/34
Townsville	1/31
Townsville	4/34
Wavell Heights	2/32
Warwick	1/31
Wide Bay	1/31
Yaraka	7/37

South Australia

Adelaide	1/31
Adelaide	3/33
Adelaide	5/35
Angaston	4/34
Blinman	3/33
Carrietown	1/31
Ceduna	1/31
Clare	7/37
Cleve	2/32
Coonalpyn	6/36
Coppudurba Hill	1/31
Hawker	7/37
Kangaroo Island	4/34
Manum	8/38
Mt Bryan	8/38
Mt Gambier	5/35
Mt Gambier	7/37
Myponga	2/32
Naracoorte	4/34
Orroroo	2/32
Port Lincoln	8/38
Port Pirie	4/34
Renmark	6/36
Snowtown	6/36
Tarcoola	6/36
Wilkatana	8/38
Yorketown	7/37

Tasmania

urnie	8/38
Central Highlands	7/37
Devonport	1/31
East Coast	6/36
Flinders Island	1/31
Hobart	1/31
Hobart	5/35
Launceston	2/32
Launceston	6/36
Midlands	4/34
North East Coast	3/33
North West Coast	4/34
North West Coast	6/36
West Coast	2/32

Victoria

Alexandra	1/31
Ballarat	2/32
Ballarat	5/35
Bairnsdale	7/37
Beech Forest	3/33
Bendigo	4/34
Cavendish	8/38
Currajung	4/34
Echuca	6/36
Euroa	3/33
Falls Creek	3/33
Foster	6/36
Geelong	4/34
Halls Gap	6/36
Hamilton	5/35
Harcourt	8/38
Hawkesdale	4/34
Horsham	3/33
Kerang	2/32
Lavington	4/34
Mansfield	2/32
Melbourne (north)	1/31
Melbourne (metro)	3/33
Melbourne (metro)	5/35
Melbourne (south)	7/37
Mildura	3/33
Moe	2/32
Mornington Pen.	8/38
Mortlake	7/37
Mt Cann	8/38
Mt Concord	6/36
Mt Delegate	3/33
Mt Terrible	8/38
Myrtleford	8/38
Penshurst	1/31
Shepparton	7/37
St Arnaud	1/31
Swifts Creek	1/31
Talangatta	7/37
Wangarrata	6/36
Waubra	7/37

West Australia

Albany	3/33
Augusta	7/37
Bencubin	2/32
Boyup Brook	4/34
Bunbury	2/32
Carnamah	2/32
Carnarvon	2/32
Coolgardie	7/37
Darkin	6/36
Denmark	1/31
Esperance	4/34
Kalgoorlie	2/32
Kambalda	1/31
Katanning	1/31
Kellerberrin	1/31
Kulin	4/34
Lancelin	4/34
Mandurah	7/37
Manjimup	6/36
Margaret River	6/36
Meekatharra	1/31
Merredin	2/32
Mia Mia	1/31
Mt Manypeaks	6/36
Mt Barker	5/35
Mt Barrow	7/37
Mt Saddleback	1/31
Mt Solus	4/34
Nannup	2/32
Perth	1/31
Perth	3/33
Perth	5/35
Perth	8/38
Ravensthorpe	8/38
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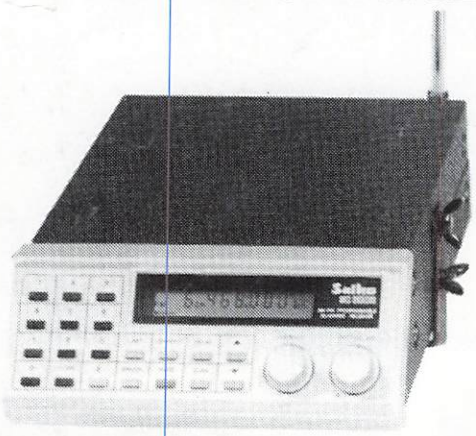

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Frequency coverage:- 26-30MHz 68-88MHz 118-176MHz 380-512MHz
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User selectable frequency steps 5kHz 12.5kHz 25kHz
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